records can readily be maintained on a spreadsheet program formatted for the school's accounts. Regular updating of the expenditure ledger with each expenditure request provides an up-to-date accounting of supply and equipment expenditures.

The recordkeeping can be done by a school administrator, such as the principal or an assistant principal, but often the task is assigned to a school secretary, clerk, or business manager.

Expenditure Requests during the Year. When a teacher or department wishes to order supplies or equipment items during the year out of the approved budget, then a series of tasks has to be carried out to ensure that proper ordering and control procedures are followed.

To begin the process, someone, usually a teacher or department head, must initiate the request. This is frequently done on some type of expenditure request form that specifies the item to be ordered; catalog number, if appropriate; quantity; purchase price; estimated shipping charges, if any; department to charge the item to; name of preparer; and ordering information, such as vendor name and address. The person making the request completes the form (or provides the necessary information to someone else who fills out the form) and submits the request to the school administration for review and approval.

Depending on the organization of the school, the request may come directly to the principal or assistant principal, or it may be submitted to the records clerk. In either case, several checks are needed before the request can be approved. First,

there must be enough money remaining in the department's budget to purchase the item. If there is not, then the appropriate administrator must either approve the overspending or transfer funds from another account to cover the deficit. Next, the form itself must be examined to see that all of the necessary information is present and correct. In particular, the type of expenditure (supply or equipment) and the department to be charged must be verified; avoiding accounting errors at this stage can save considerable time and frustration later. The final check ensures that the expenditure request is consistent with the curricular direction and priorities of the instructional department. Requests submitted by department heads presumably already have been coordinated instructionally within the department; however, schools without a department head structure need a mechanism for making the link between curriculum and expenditures. With these checks carried out, the request form can be signed by the appropriate school administrator, indicating approval of the expenditure request.

Once approved at the school level, the request is forwarded to the district office, which issues a purchase order for the item. The school receives a copy of the purchase order and keeps it on file until the item is received. The person or department receiving the shipment of the item is responsible for verifying that the full shipment has been received in good condition. This information is submitted to the school administration for entry into the account books and is forwarded to the district office, which then issues payment on the purchase order.

## Monitoring Expenditures

As noted previously, the budget amounts established for each department are estimates of the expenditures that it expects to incur during the school year. However, actual events rarely go exactly as expected. Prices differ, shipping charges change, different items are substituted for the original budgeted items, and so forth. This is not necessarily a result of poor management, and school administrators need to respond to the changed conditions in ways that are effective and improve the operation of the school.

A common element in high school expenditure monitoring systems is a review of departmental spending patterns during the year. Two pieces of information are needed for these reviews: the amount of money left in each budget account and the spending plans for the department or other unit under review. Frequency of reviews will vary; some schools have only a year-end review, while others also have a mid-year review to allow more time to adjust expenditures. The timing of any review is important. A mid-year review--in February, for example--points out to administrators, department heads, and faculty how much of the available budget has been spent and how much remains to complete the year. A mid-year review also can stimulate departments to plan more effectively for necessary purchases to meet needs that emerged after they made initial expenditures from their budgets (e.g., replacing lost textbooks, replenishing laboratory supplies, replacing worn out or broken equipment). These mid-year reviews tend to be done informally; often they involve

discussions between an administrator and individual department heads and teachers. Their purpose is to monitor progress and provide information on spending plans for the rest of the year.

Administrators use year-end reviews primarily to look at available dollars in each account and to decide whether and how to spend them. The philosophy of the district and school administration will guide the outcome of the year-end reviews. On one hand, the emphasis may be on spending the remaining budget amount by the end of the year. While this can lead to wasteful and unnecessary expenditures, there are usually more than enough worthwhile educational expenditures that a high school can make with money unspent near the end of the school year. From an educational standpoint, any funds remaining at the end of the year offer the opportunity to strengthen or expand instructional programs or support and administrative operations. Other districts and schools may guard against spending all of the budget if they need to reduce their costs or if they want to avoid using supplies purchased from the previous year's budget during the next school year. The decisions resulting from the year-end reviews will reflect the approach the district uses and may include specific spending plans or a freeze on further expenditures.

The reviews can be done either formally or informally. They can involve departmental meetings, proposals by department heads, or decisions by school budget committee or administrators. The year-end review comes several months prior to the actual close of the school year. The reason for this is to allow all transactions to be completed before the school year ends. To

ensure that this happens, school districts set deadlines for expenditure requests to make sure that the requested items are delivered before the end of the school year. For example, one of the districts in the study established April 1 as the final date for ordering from an outside vendor and May 1 as the deadline for ordering from the district warehouse. Consequently, year-end reviews in schools needed to precede those dates. Following the review and prior to any district or school ordering deadline, departments or teachers follow the regular expenditure request procedures to order their items.

From the district's perspective, the primary concern for the high schools' supplies and equipment expenditures generally is that the school stay within its overall allocation. Of less concern is how the allocated amount is divided up among the different departments or how they actually spend it. This means that some departments can spend more than their budgeted amounts if the amounts are balanced by funds from other departments that spend less than their budgets. This provides the school administrators with flexibility to work with the school's various departments. For example, a science department's request to overspend its budget by $1,700 to purchase an additional microscope for the biology laboratory could be approved if an administrator knows that the business department will be $2,000 underbudget in its expenditures for instructional supplies and if it is decided that the microscope purchase is an appropriate use of those funds.

Two approaches are utilized to shift budgeted expenditures

from one department to actual expenditures in another. The first approach involves transferring the budgeted amount from one department to another. This requires a transfer request initiated at the school level, approved by the principal, and forwarded to the district office for approval and incorporation into the district's accounting ledgers. Transfers of supply money from one department to another are commonly made, but districts may prohibit some other types of transfers to prevent draining money away from priority areas. For example, districts may prohibit allocation transfers from textbooks to supplies or equipment, from personnel accounts to nonpersonnel accounts, from equipment to supplies, or from instructional to administrative areas. Within the district limitations, however, schools may be permitted to transfer funds at any time during the year to match spending needs.

The result of the transfer, which is a paper transaction, is that it balances the accounting records of the various departments so as not to show overspending and underspending. The department receiving the transfer has its budgeted allocation increased by the amount of the transfer, while the department from which money is taken has its allocation decreased by the same amount. The school as a whole has no change in budget allocation; only the distribution has been altered to reflect actual expenditures during the year.

Another approach to monitoring and approving year-end expenditures is to do away with transfers. In this approach the same administrative approval is required for a department to spend more than in its original budget allocation. However, no

accounting transfer of funds is made; and the expenditure reports for those departments that have greater expenditures than were budgeted (with approval) will show the department as overbudget while those departments that spend less will appear to have funds still available. In this situation administrators also have to balance overbudget and underbudget expenditures among the high school's various departments to stay within the school's total allocation. Cost reporting in this approach features the comparison between the actual expenditures for departments versus the original budget allocations. In the transfer approach, the actual expenditures are stressed. The net results under both approaches are identical, and the expenditure information the reporting system generates can be utilized in planning the departmental allocations for the next year.

Expenditure Control in Sample High Schools

Each of the four high schools studied has its own system of monitoring, controlling, and adjusting expenditures during the year. The general pattern of activities is similar among the schools, but each has its particular procedures.

Advance High School. The departmental organization at this high school directs the general procedures for monitoring and controlling the budget allocations. The ordering of supplies and equipment during the year is initiated by teacher requests for items approved in the departmental budget allocation. The actual ordering is done by a departmental aide, who completes a purchase order form that is checked by the department head. The purchase

order is sent to the school business manager, who checks the department account to ensure that funds are still available and that the proper budget account and expenditure code are on the purchase order. If the form is correct and the funds are available, the business manager then processes the purchase order in the district's normal purchasing system.

At the beginning of the school year the business manager establishes a ledger page for each expenditure account for each department. The beginning balance in each account is the amount established by the school's budget allocation. All orders and expenditures during the year are recorded in the appropriate account and a current balance of unspent funds by account is maintained. The business manager sends the department heads periodic reports on the amounts that they have available in their accounts.

The school district does not permit any carryover of unspent funds; monies that are not spent during the year are returned to the school district general fund. Similarly, the school district does not permit the purchase of supplies and equipment on an accrual approach, in which items are ordered and paid for during the current year but are not physically received until the following year. Consequently, well before the end of the school year, around April, the business manager, school administrators, and department heads look at the remaining funds for the school. The business manager reviews each department's accounts and sends department heads memoranda suggesting appropriate transfers of funds between accounts. Transfers within a department--from equipment to supplies, for example--are done by memoranda

prepared by the business manager and approved by the department head and a school administrator. The memoranda are then sent to the district office for entry into the books of account. When departments wish or need to exceed their budgeted allocation, a transfer is requested from the principal's fund (the high school's contingency account). Alternatively, the funds can be transferred from one department to another; these transactions require the approval of the school administrators and the department from which funds are being taken.

Textbooks, library books, and periodicals are ordered by the library clerk, who follows the same procedures used by the departments. The department heads and teachers are consulted prior to ordering to confirm that the items are appropriate for the curriculum.

Bridge High School. At this high school there are no department heads, so it is necessary to include in the expenditure control process a step which ensures the coordination between the instructional program and the purchasing procedures. The expenditure requests are categorized by the type of item being ordered. Those items that are considered to be general instructional supplies and which are expected to be used up during the school year are ordered, with no curricular review, directly through the purchasing process. Items which have long-term curricular implications, such as textbooks, library books, computer software, and equipment, require instructional approval as well.

The ordering procedures are the same for both types of

items, but the curricular items go through an additional step. The ordering is initiated by a teacher or media center personnel (for textbook and software orders). First they complete a request-for-purchase form, which must include all of the information necessary to order the item. The form is then sent for review to the assistant principal for administration. If the request appears to be appropriate, the form is routed to the budget secretary to verify that funds are available in the account, and it is then returned to the assistant principal. At this point, the requests are categorized as curricular or noncurricular. Requests for general supplies (noncurricular) are then approved by the assistant principal and the supplies ordered by the budget secretary. Requests for curricular items are first sent to the appropriate division leader, who confirms that the purchase fits the curriculum plans of the department and division. The form is then returned to the assistant principal and if everything is in order, the request is approved and forwarded to the budget secretary to be processed.

The budget secretary maintains the supplies and equipment budget records on a microcomputer spreadsheet. The spreadsheet is formatted with the budget accounts and the departmental codes. The budget allocation, the expenditures and orders during the year, and the available balance are kept in the spreadsheet. The budget secretary also prepares a monthly report that provides the amount of funds remaining in the accounts for each department. The report is sent to all staff in the school.

The division leader and the assistant principal for

administration (or budget coordinators, depending on the instructional division, meet several times yearly with each department's teaching staff to discuss instructional and budgetary issues. At the beginning of the year the meetings focus on curriculum needs and priorities for expenditures during the year. A mid-year meeting is used to review expenditures and remaining funds and to revise spending plans so that they are in line with instructional plans. At the year-end meeting each departmental group reviews remaining funds and discusses end-of-year spending plans, transfers of funds, and means of using up the budget reasonably.

Bridge High School administration has established a deadline for teacher requests. After the cutoff date for teacher requests, all unused departmental funds revert back to the school for general use. Year-end spending decisions involving the unspent funds are made by the school budget committee, which attempts to mesh expenditures with schoolwide priorities. Because the year-end departmental meetings frequently come after the school-imposed deadline, those meetings serve to inform the budget committee of the teachers' needs and wants. All expenditures made after the deadline are approved by the principal and assistant principal for administration.

Central High School. At this school, department heads are responsible for ordering supplies and equipment. They fill out a requisition form that identifies the item requested, quantity, price, departmental account to charge, and the vendor's name and address. The requisition forms are submitted to the budget

secretary for the school, who screens the requisitions for proper charge numbers and availability of funds in the account. If all information is correct, a purchase order is prepared and submitted to the assistant principal. The assistant principal reviews the purchase order for legality, assesses the ordered material's appropriateness for the instructional program, and ensures that funds are available; the purchase order is approved if everything is in order. (Purchase orders for athletic supplies are approved by the athletic director.) Once approved, the budget secretary submits the purchase order to the district office for processing in the district purchasing system.

The budget secretary maintains an account sheet for each department and records the original allocation and any expenditures during the year. As expenditure requests are approved, the department is charged for the amount of the request, and the amount remaining in its account is calculated. Disbursements from petty cash are charged back to the responsible department and deducted from its remaining allocation. Periodically, the budget secretary prepares for each department head a card that lists the remaining funds for the instructional supplies account.

The assistant principal notifies the department heads of the district cutoff date for year-end orders (approximately the third week in May), along with the amount remaining in the departmental account. The department heads are encouraged to plan their year-end requests wisely and to spend funds to fill specific instructional needs rather than to spend them just to use up the allocation. The assistant principal monitors the year-end

spending requests to make sure that expenditures are appropriate. If a department has a particular need, it is permitted to overspend its allocation as long as the total school allocation is not exceeded. The amount remaining in the principal's fund or from other departments is used to balance the accounts of departments that overspend their allocated amounts. The school's administration tries to avoid account transfers so that it can know what the actual costs are for each department.

Delegate High School. Teacher requests for supply and equipment items are the starting point at this school. Teachers fill out a purchase order request form when they wish to order an item. The form is sent to the department head, who reviews it for curricular appropriateness. If approved, it is sent to the area coordinator for review and approval. The area coordinators maintain their own set of ledger accounts where they record budget allocations, expenditures, and remaining funds in each account. After the area coordinator approves it, the request form is sent to the budget secretary, who fills out a requisition form signed by the principal. Finally, the form is forwarded to the district office, which then issues a purchase order for the requested item.

During the year, the area coordinator has the responsibility for monitoring departmental requests; this ensures that expenditures are within their allocation. Requests for spending beyond the original allocation amount are reviewed by the area coordinator; if the requests are appropriate, unspent funds from another department within the area are used. If this is not

feasible, funding from departments outside the area is sought (in consultation with the other area coordinators) or from the principal's contingency fund.

Year-end requests are scrutinized closely to discourage "spend it up" behavior. Stockpiling of supplies from the current budget for use in the following year is discouraged. The principal believes that the budget should be an accurate reflection of yearly needs and that the district administration provides reasonable allocation amounts to operate the high school's programs. When this is not the case, he will argue strongly for additional funds to meet the school's legitimate educational needs. Transfers of allocation amounts between departments are not done; the overages and shortages for each department provide realistic information for budgeting in future years. Like the other schools, Delegate High School allows some departments to spend more than their allocation if other departments spend less than their allocation and if the total school allocation is not exceeded.

## CONCLUSIONS

The four high schools investigated in this study present both a picture of overall similarity in fundamental resource allocation activities and an interesting variety of specific approaches in implementation. All districts had processes for determining the types and quantities of district resources allocated to the high schools; and while the high schools had some influence over the amounts, the decisions in this area were clearly made by the district administration and school board.

Although all the high schools had slightly different procedures for distributing their allocations among their instructional departments and support and administrative units, it was in the internal budgeting process that the schools in the study showed the greatest variation. All the high schools had specific systems for managing expenditures during the school year; they all tried to maintain departmental spending within budgeted allocations; but at the same time, they attempted to maintain sufficient flexibility to respond to legitimate requests for additional expenditures. In this phase of resource allocation, the four high schools showed similarities in the specific procedural activities, although the personnel responsible for those activities varied.

The key decision points in the resource allocation process from the perspective of the high school principal are largely in the distribution phase. It is here that the flexibility for administrative action is greatest. The design of the budget process--distributing the available resources--allows the principal to determine who will be involved, the extent of their involvement, and how much responsibility and authority they will share. Key questions the principal must consider include: can compatibility and coordination exist between the instructional and budgeting organizations in the high schools?; should a centralized, decentralized, or intermediate approach be used?; what level of involvement (if any) should teachers, department heads, and support staff have?; what rules should be established for making resource allocation decisions when requests exceed

available resources?; and how much information should be provided to the participants and nonparticipants in the process?

There is certainly no single answer to each of these questions. As the four school demonstrate, there is a range of effective practices. Whether to use centralized or decentralized decision-making procedures, whether or not to include department heads in the school's instructional organization, whether or not to use area coordinators for instructional or budgetary administration, whether to integrate supply and equipment allocations or treat them separately--all of these are examples of issues which administrators at the four schools resolved differently. But regardless of its individual approach, each school still managed to operate adequately.

Each of the four high schools is a unique place in which to work as a teacher or administrator. There are substantial differences in the organization and operation of the schools' instructional, administrative, and budgeting activities. These differences reflect a variety of factors, including the level of control and authority the district administration gives to the principal, the personality and administrative philosophy of the principal and other school administrators, the expectations and experiences of the school staff, and the attitudes and values of the community. Each school reflects these differences, and each school appears to be operating satisfactorily with its own approach.

The match between the structure and management of a high school and these influencing factors is an important element in the successful operation of the school. If the systems the

school establishes for instruction and administration are not compatible with the constraints and capabilities of the district administration, school personnel, and the surrounding community, conflict will result. For example, the decentralized style of management utilized at Advance High School could not be implemented at Central High School without substantial changes in attitudes and without staff training in effective group decision-making. Conversely, the centralized decision-making approach used at Central High School would cause an outright rebellion among the staff at Advance High School because its staff expects to share significantly in the school's resource allocation decision. One approach is not better than the other, but the approach chosen must be appropriate for the school. If changes are desired, they can be made; but the staff (and possibly the district administration and the community) must understand the changes and be prepared to adopt new roles and responsibilities when they are made.

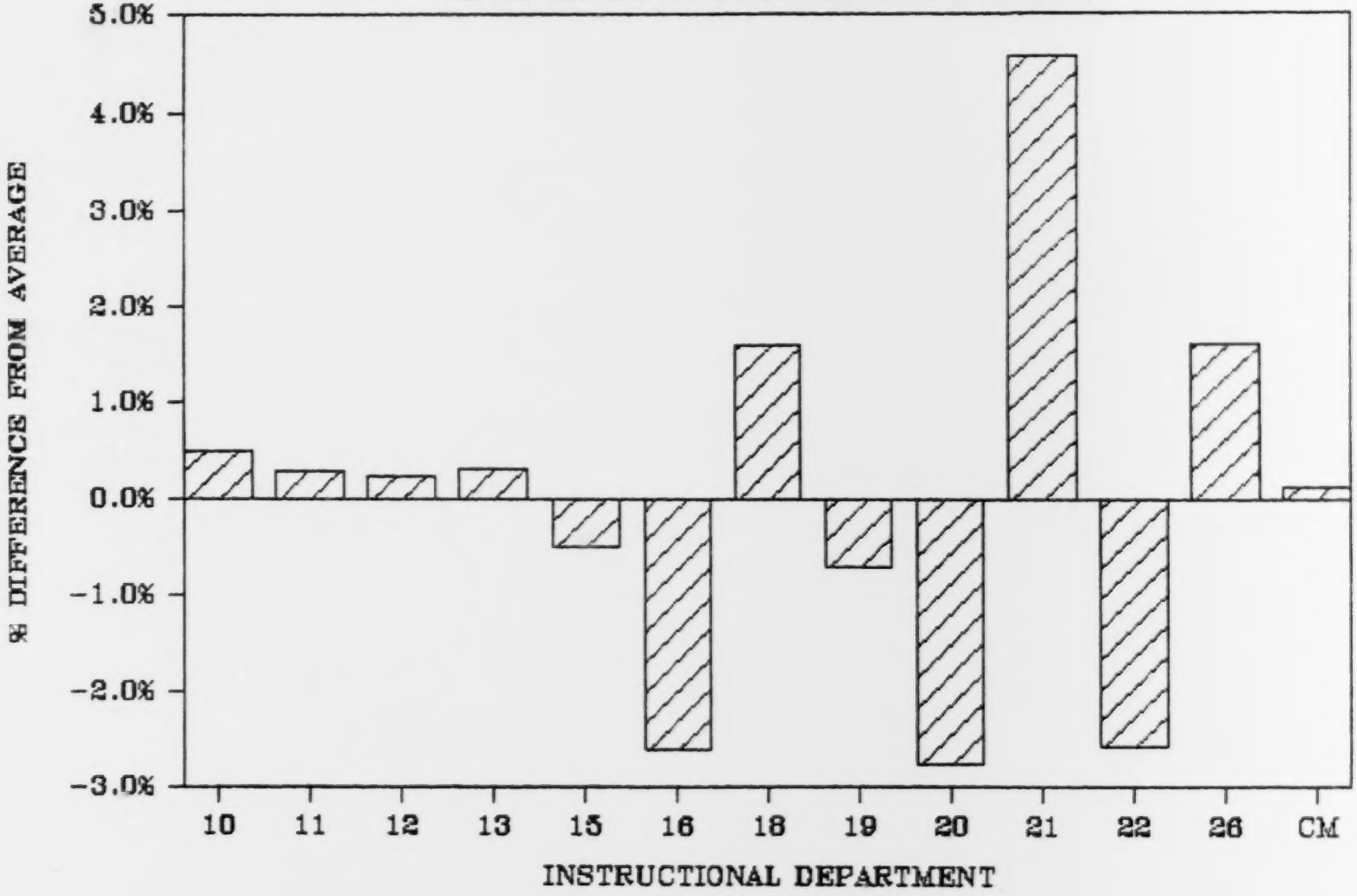
# APPENDIX A

## COMPARISONS OF ADVANCE HIGH SCHOOL WITH FOUR-SCHOOL AVERAGE

APPENDIX A - FIGURE 1

# % STUDENT ENROLLMENT BY DEPARTMENT

## ADVANCE HS VS. FOUR-SCHOOL AVERAGE

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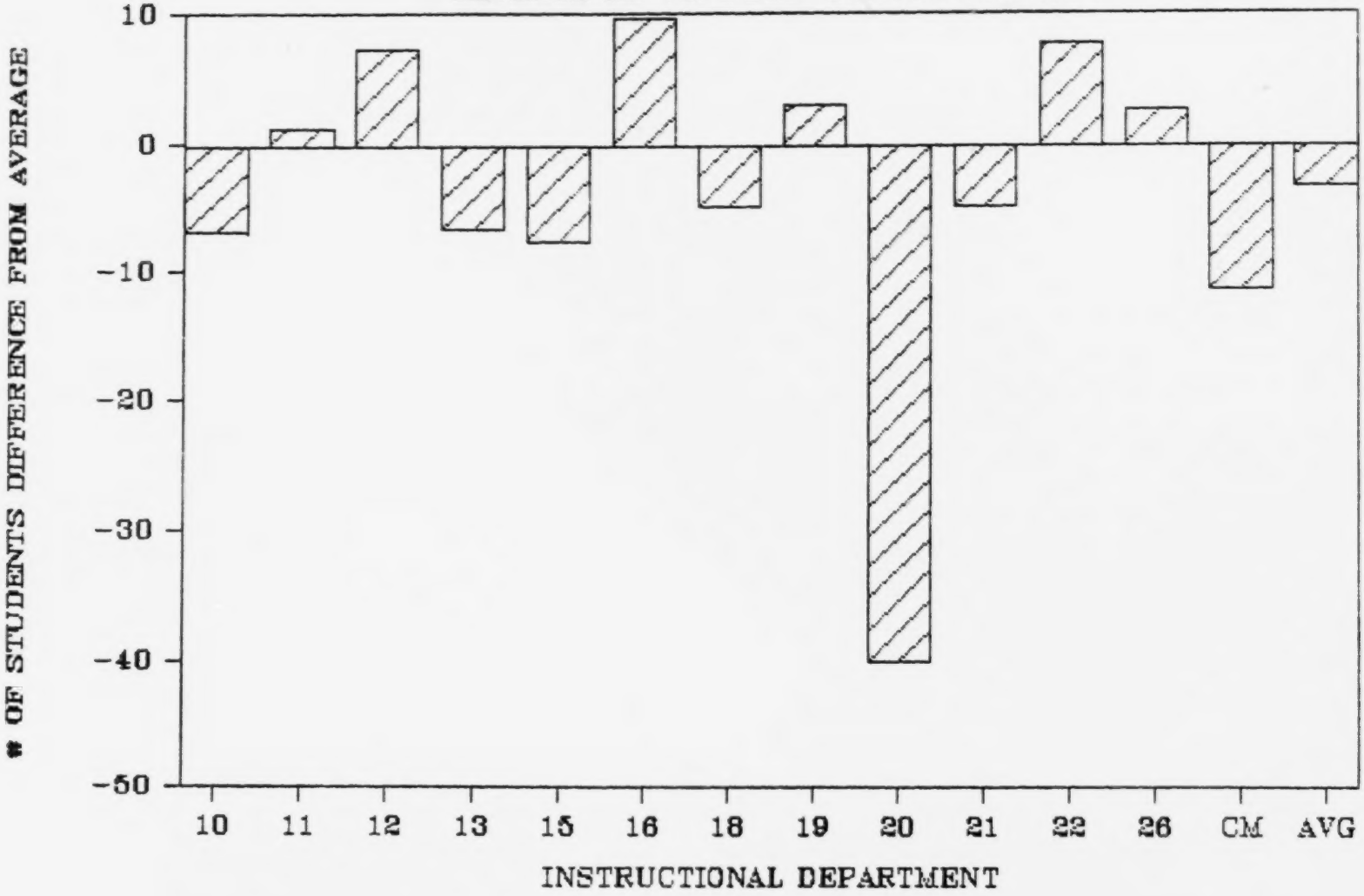
| 11 | SOCIAL STUDIES | 18 | MATHEMATICS | 22 | BUSINESS EDUCATION |
| 12 | SCIENCE | 19 | HEALTH | 26 | MUSIC & DRAMA |
| 13 | ARTS & CRAFTS | 20 | PHYSICAL EDUCATION | CM | COMPUTER |
| 15 | HOMEMAKING | | | | |

APPENDIX A - FIGURE 2

# DIFFERENCES IN STUDENTS PER TEACHER

## ADVANCE HS VS. FOUR-SCHOOL AVERAGE

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18 MATHEMATICS
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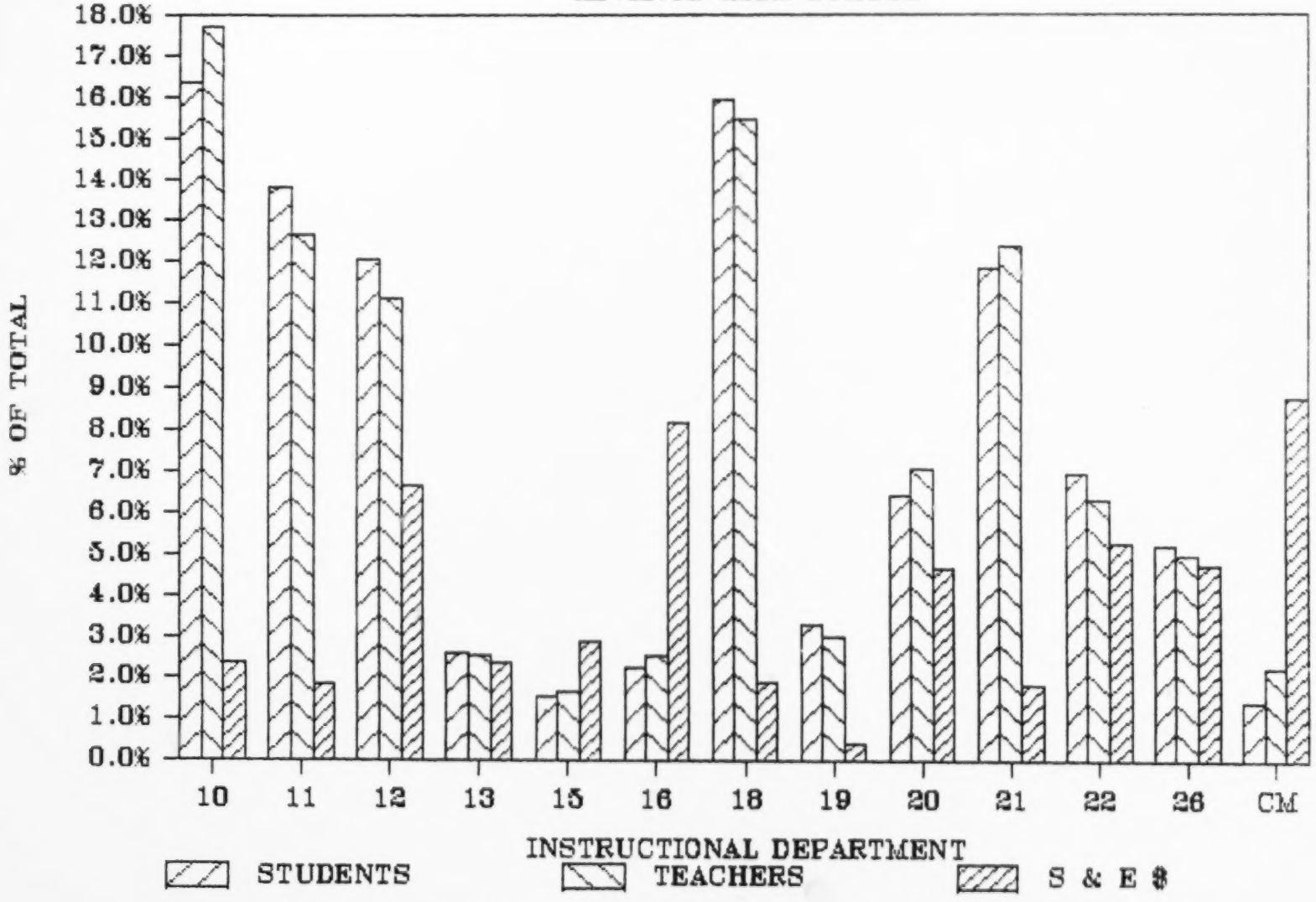
20 PHYSICAL EDUCATION
21 FOREIGN LANGUAGE
22 BUSINESS EDUCATION
26 MUSIC & DRAMA
CM COMPUTER

APPENDIX A - FIGURE 3

# DISTRIBUTION OF STUDENTS, TEACHERS, & $

ADVANCE HIGH SCHOOL

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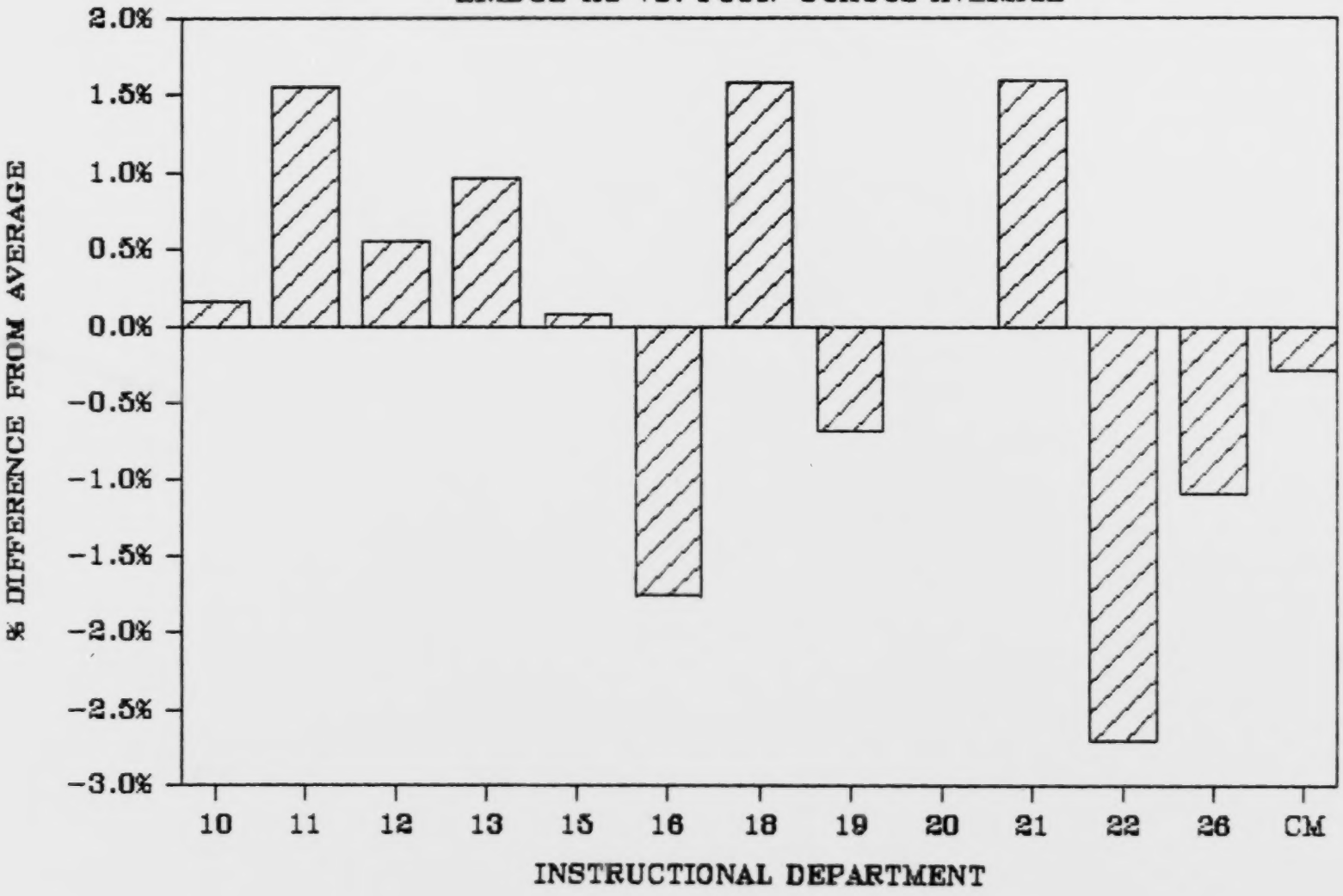
# APPENDIX B

## COMPARISONS OF BRIDGE HIGH SCHOOL WITH FOUR-SCHOOL AVERAGE

APPENDIX B - FIGURE 1

# % STUDENT ENROLLMENT BY DEPARTMENT

## BRIDGE HS VS. FOUR-SCHOOL AVERAGE

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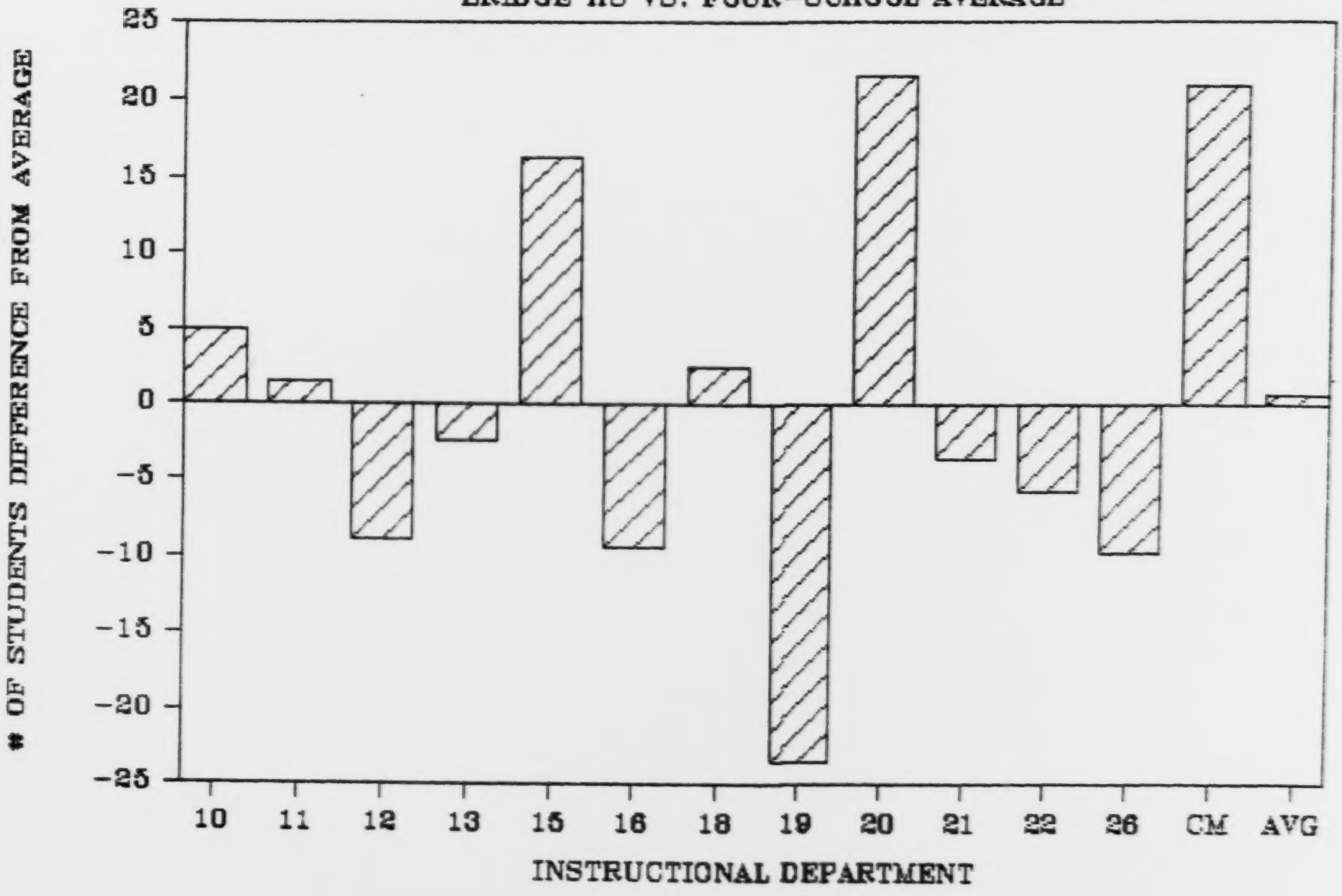
| 13 | ARTS & CRAFTS | 20 | PHYSICAL EDUCATION | CM | COMPUTER |
| 15 | HOMEMAKING | | | | |

APPENDIX B - FIGURE 2

# DIFFERENCES IN STUDENTS PER TEACHER

## BRIDGE HS VS. FOUR-SCHOOL AVERAGE

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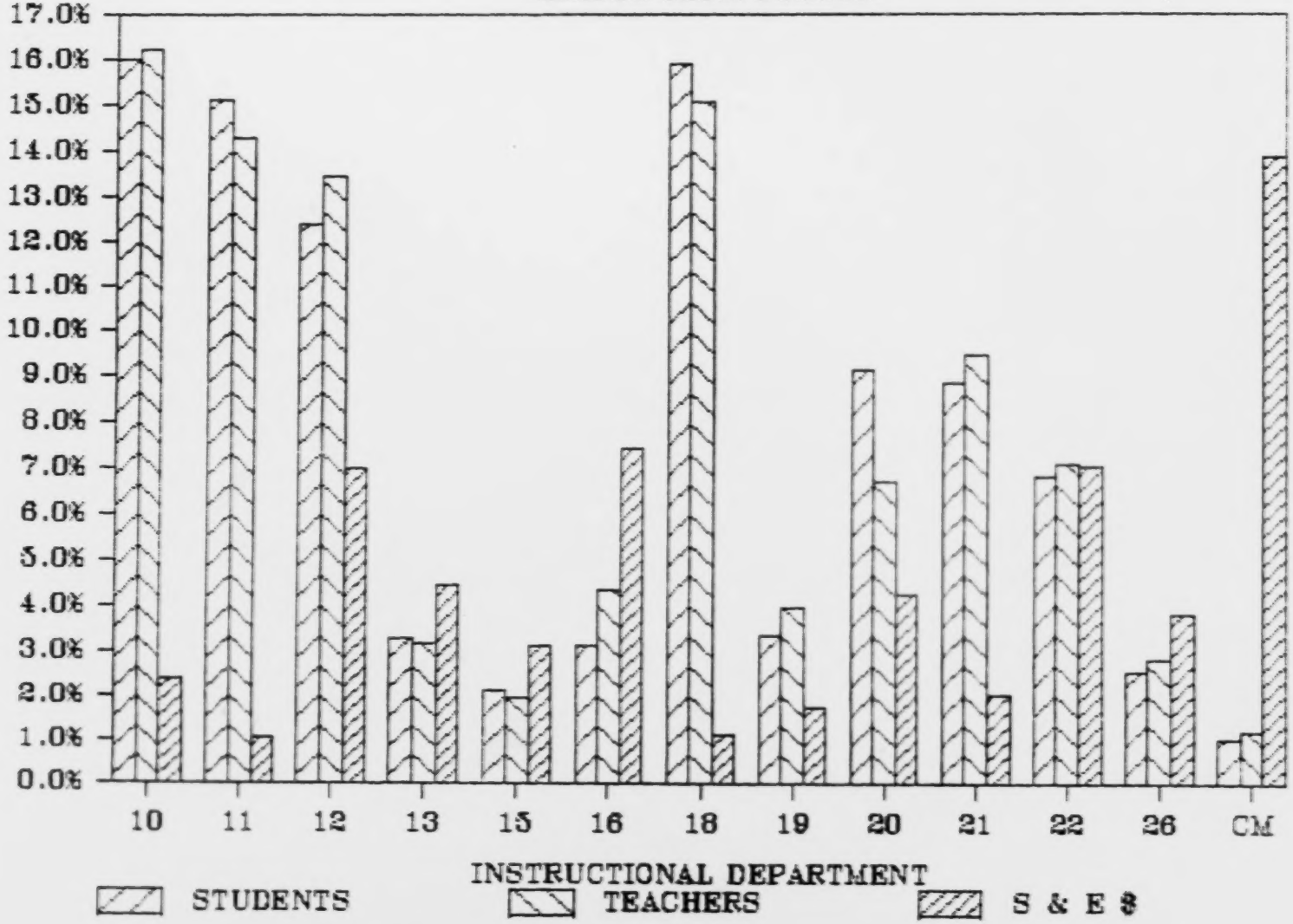
20 PHYSICAL EDUCATION
21 FOREIGN LANGUAGE
22 BUSINESS EDUCATION
26 MUSIC & DRAMA
CM COMPUTER

APPENDIX B - FIGURE 3

# DISTRIBUTION OF STUDENTS, TEACHERS, & $

BRIDGE HIGH SCHOOL

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21 FOREIGN LANGUAGE
22 BUSINESS EDUCATION
26 MUSIC & DRAMA
CM COMPUTER

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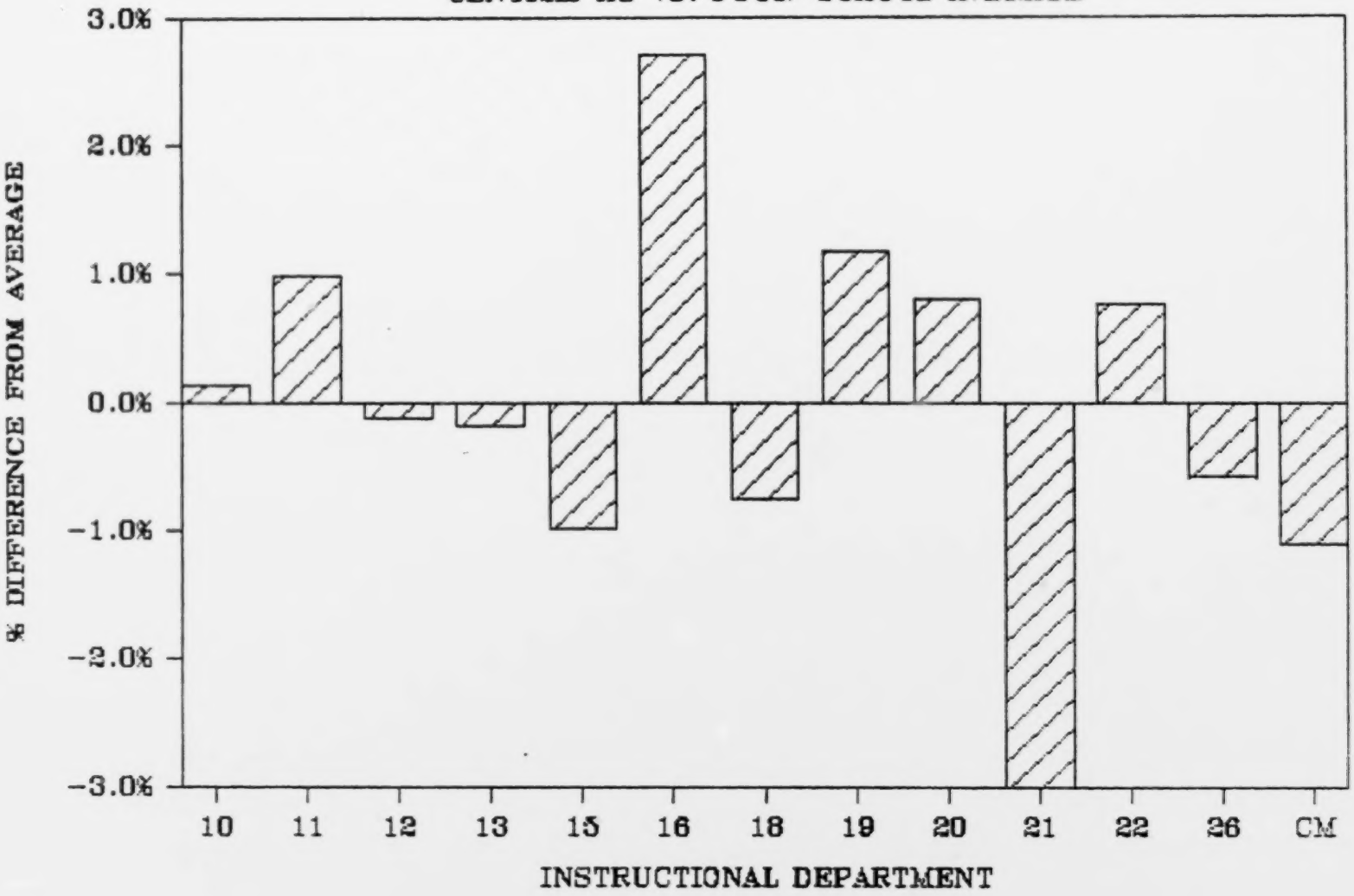
## APPENDIX C

## COMPARISONS OF CENTRAL HIGH SCHOOL WITH FOUR-SCHOOL AVERAGE

APPENDIX C - FIGURE 1

# % STUDENT ENROLLMENT BY DEPARTMENT

## CENTRAL HS VS. FOUR-SCHOOL AVERAGE

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| 13 | ARTS & CRAFTS | 20 | PHYSICAL EDUCATION | CM | COMPUTER |
| 15 | HOMEMAKING | | | | |





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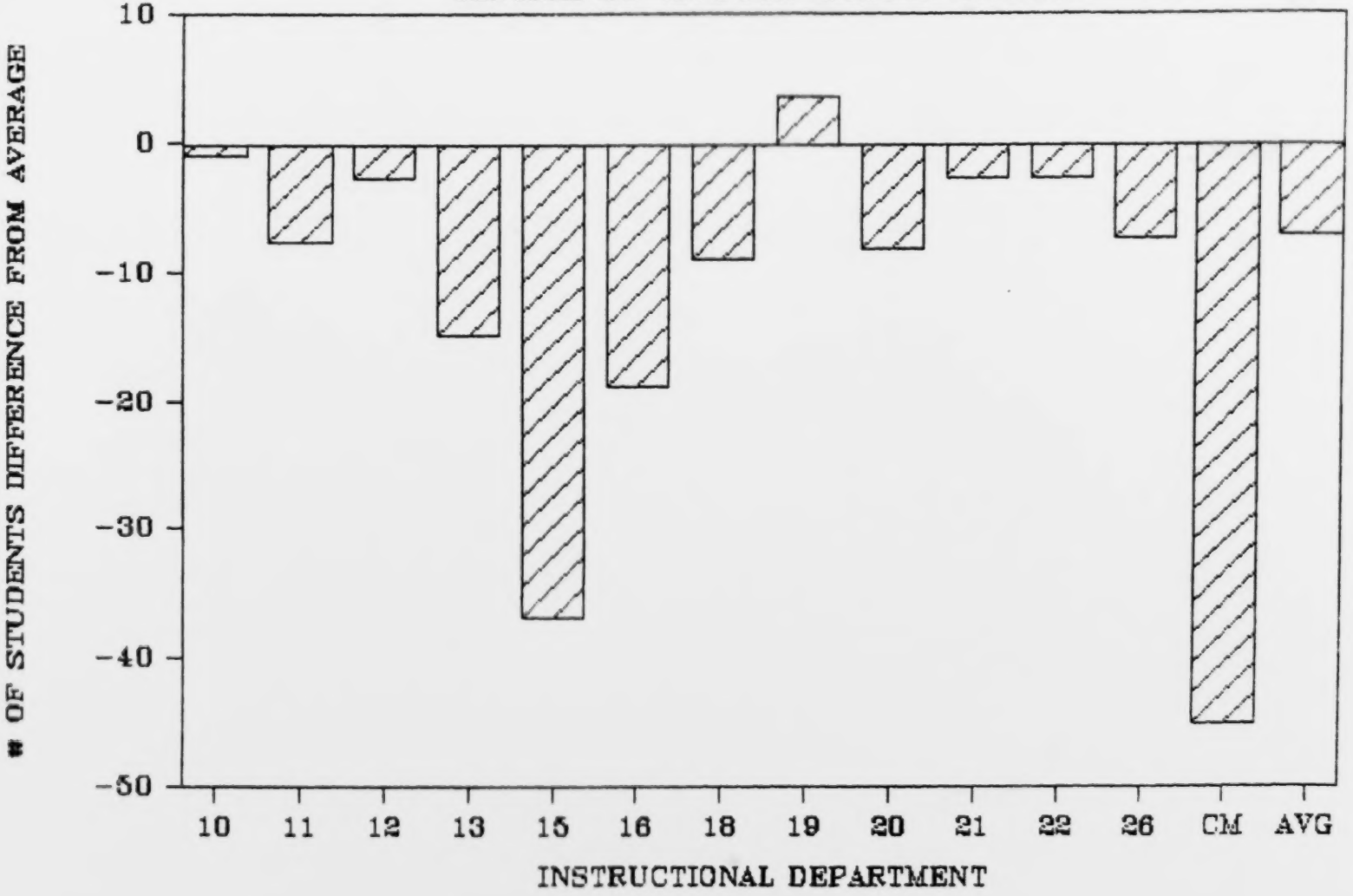
APPENDIX C - FIGURE 2

# DIFFERENCES IN STUDENTS PER TEACHER

CENTRAL HS VS. FOUR-SCHOOL AVERAGE

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CM COMPUTER







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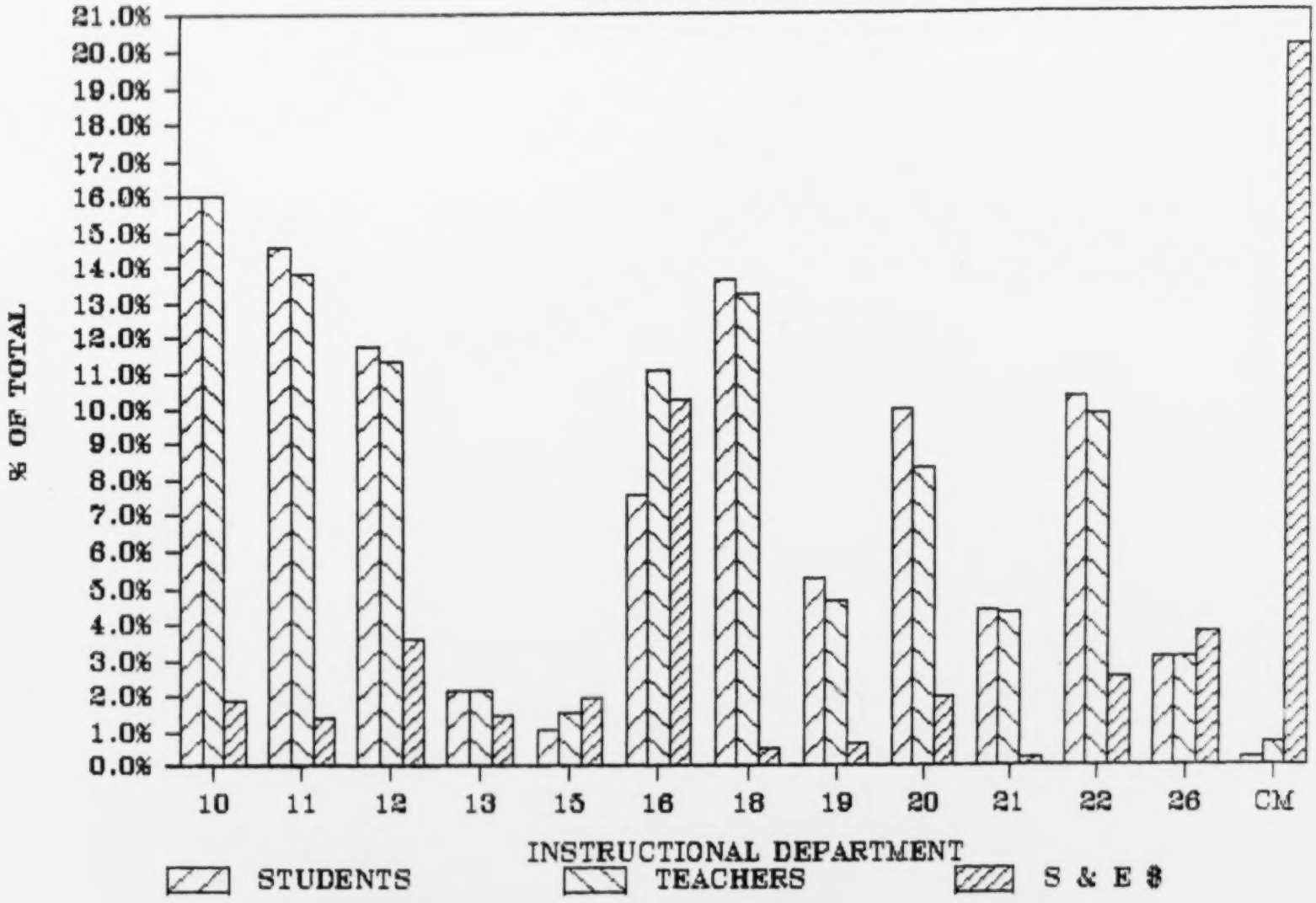
APPENDIX C - 3

# DISTRIBUTION OF STUDENTS, TEACHERS, & $

CENTRAL HIGH SCHOOL

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21 FOREIGN LANGUAGE
22 BUSINESS EDUCATION
26 MUSIC & DRAMA
CM COMPUTER



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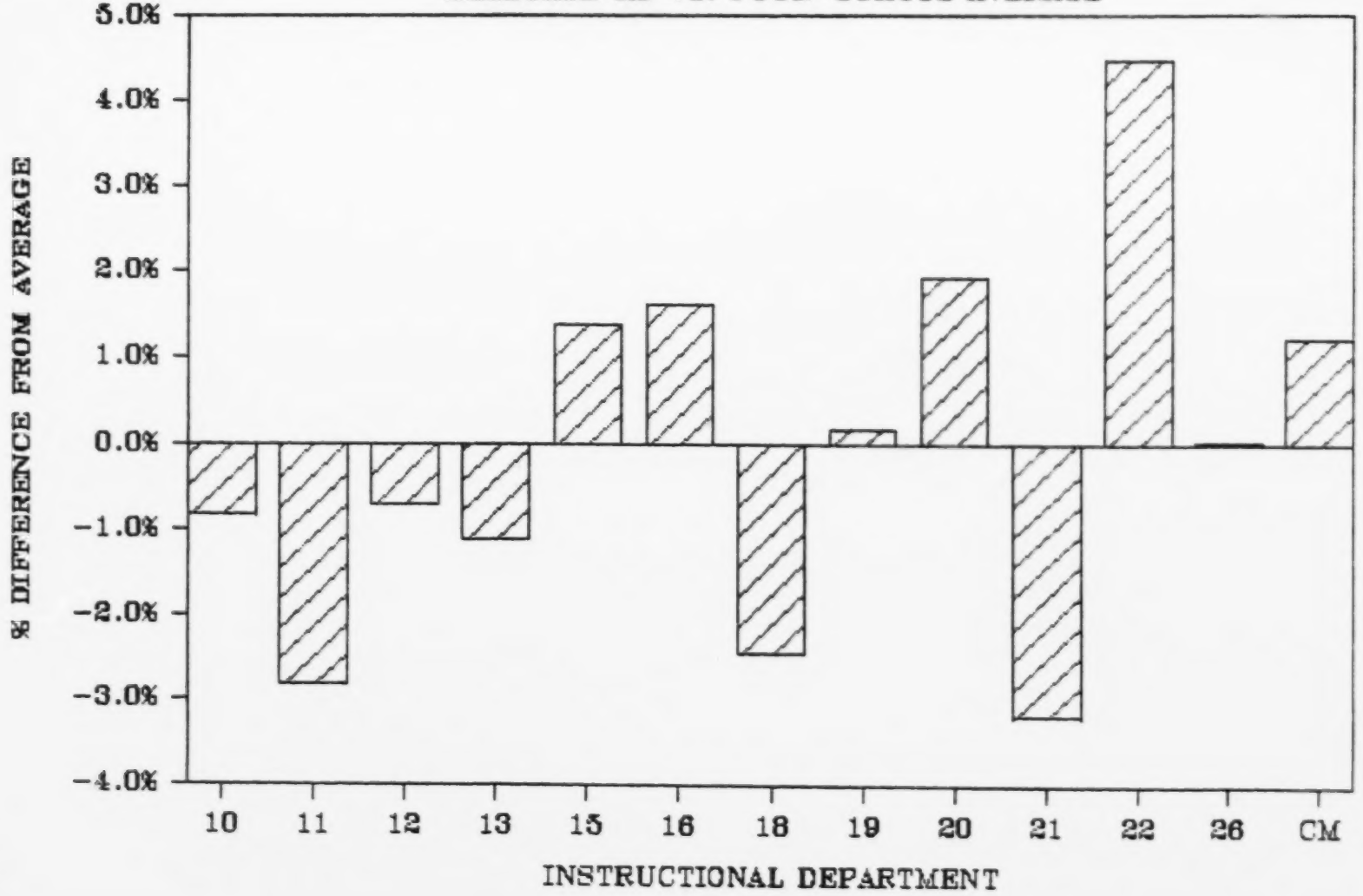
## APPENDIX D

## COMPARISONS OF DELEGATE HIGH SCHOOL WITH FOUR-SCHOOL AVERAGE

APPENDIX D - FIGURE 1

# % STUDENT ENROLLMENT BY DEPARTMENT

## DELEGATE HS VS. FOUR-SCHOOL AVERAGE

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| 13 | ARTS & CRAFTS | 20 | PHYSICAL EDUCATION | CM | COMPUTER |
| 10 | HOMEMAKING | | | | |

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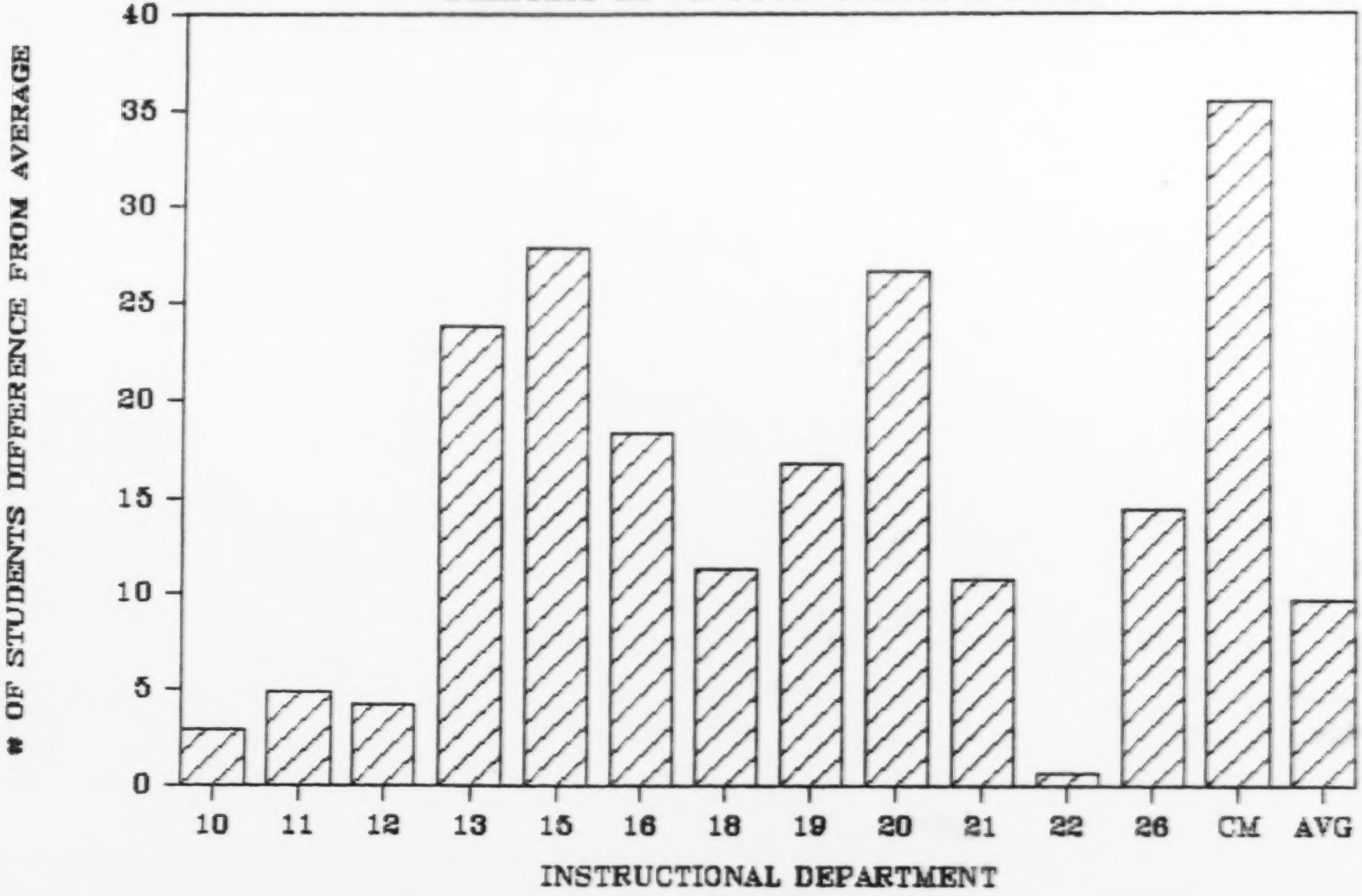
APPENDIX D - FIGURE 2

# DIFFERENCES IN STUDENTS PER TEACHER

## DELEGATE HS VS. FOUR-SCHOOL AVERAGE

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15 HOMEMAKING
16 INDUSTRIAL ARTS
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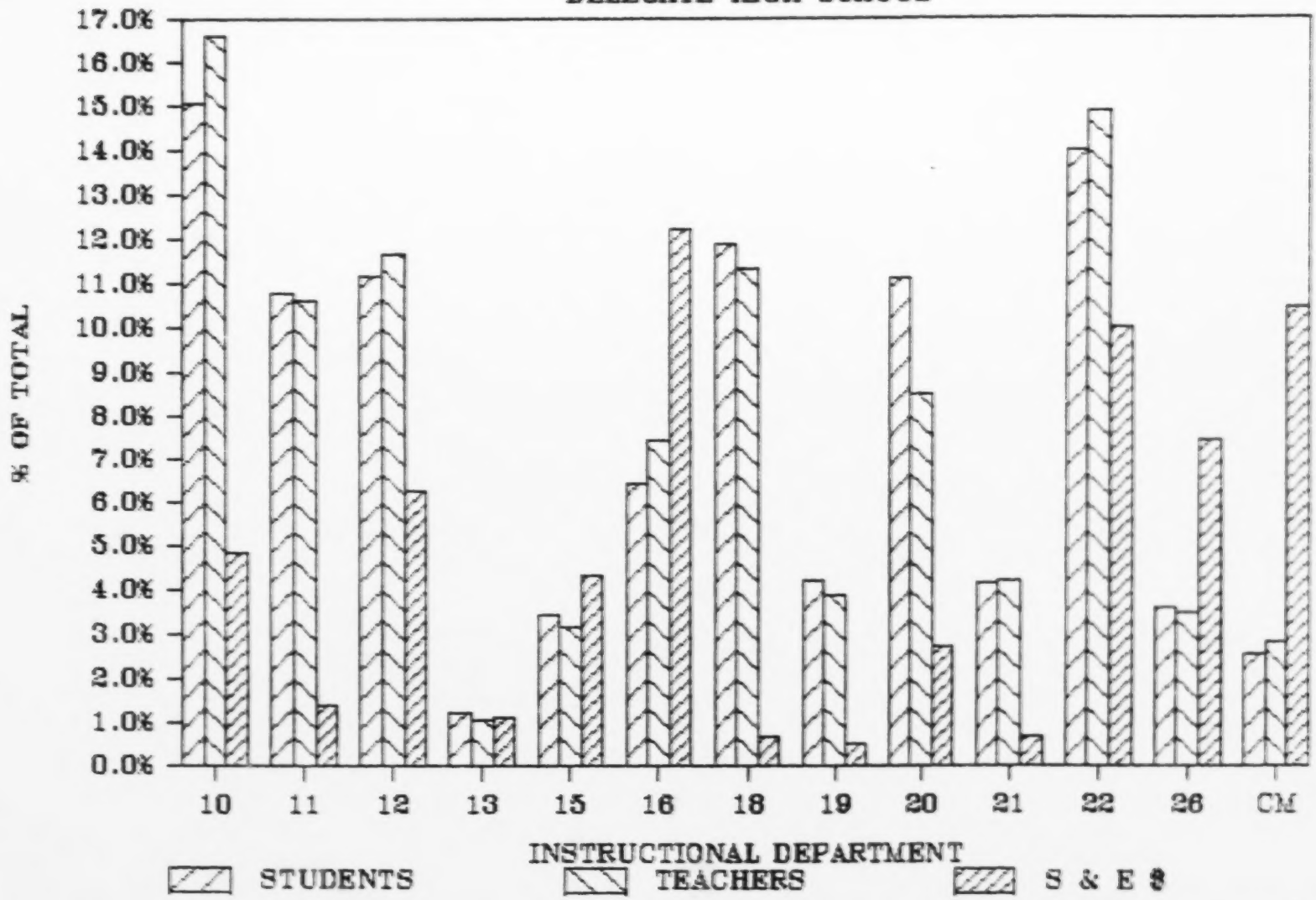
APPENDIX D - FIGURE 3

# DISTRIBUTION OF STUDENTS, TEACHERS, & $

## DELEGATE HIGH SCHOOL



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DOCUMENT RESUME

ED 266 556 EA 018 299

| | |
|---|---|
| AUTHOR | Hartman, William T. |
| TITLE | Resource Allocation in High Schools. Final Report. |
| INSTITUTION | Oregon Univ., Eugene. Center for Educational Policy and Management. |
| SPONS AGENCY | National Inst. of Education (ED), Washington, DC. |
| PUB DATE | Mar 86 |
| NOTE | 140p. |
| PUB TYPE | Reports - Descriptive (141) -- Reports - Research/Technical (143) |
| EDRS PRICE | MF01/PC06 Plus Postage. |
| DESCRIPTORS | *Administrator Responsibility; *Budgeting; Delivery Systems; Educational Equipment; Educational Planning; Expenditures; *High Schools; Input Output Analysis; *Operating Expenses; Personnel Management; Purchasing; *Resource Allocation; *School Administration; Staff Utilization |

ABSTRACT

This study investigated the resource allocation process--how school administrators obtain the proper resources to operate their schools, distribute the available resources among the various school programs appropriately, and manage resources for effective educational results--in four high schools during the 1984-85 school year. Information was gathered from each school through observations, interviews, documentary material, and discussions with district personnel. On the basis of these data, a description of each school's resource allocation process was developed, and the feasible alternative approaches that administrators took in each component of the resource allocation process were identified and compiled into a three-part overall description of the process, covering acquisition, distribution, and management of resources, respectively. Quantitative analyses were also conducted to examine and compare the choices and results for each school. Numerous figures and data tables are contained in the text, and four appendixes provide comparisons of data from each individual school with the four-school average. (TE)

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# RESOURCE ALLOCATION IN HIGH SCHOOLS

by

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March 1986

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The preparation of this final report for FY 85 was made possible through an Institutional Grant awarded by the National Institute of Education to the Center for Educational Policy and Management. The opinions expressed in this report do not necessarily reflect the positions or policies of the NIE or the U.S. Department of Education.

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## INTRODUCTION

High school administrators are often characterized as having very fragmented days in which they confront numerous problems that require rapid decisions and consume the vast majority of their time. However, in organizing and operating their schools they also face several important and basic management decisions that affect how the daily routine is or can be handled. These decisions involve the school's administrative organizational arrangement, the distribution of responsibilities within the school, the school's system of governance and decision making, the scope and content of the school's curriculum, the selection of teaching and classified staff, the management style of the principal, and the allocation of the school's available resources. Decisions that principals make are not independent of each other; rather they are interrelated and, in an effective high school, are consistent and reinforce each other.

This study focuses on one aspect of the management of high schools--resource allocation--but it is important to recognize at the outset that the resource allocation system is a part of the larger process of administering a high school. The procedures for allocating a high school's are circumscribed by the school's other management and operating procedures and by policy and legal constraints established by the school district and state. To complete the cycle, the results of the resource allocation process impact on almost all areas of the school's operation and can be a powerful device for shaping and directing the organization.

## PURPOSE OF THE STUDY

The purpose of this study is to describe how school administrators obtain the proper resources to operate their schools, distribute the available resources among the various school programs appropriately, and manage resources for effective educational results. Taken together, these three aspects--acquisition, distribution, and management--comprise the resource allocation process. Resources include personnel and other items, such as services, supplies, and equipment, that can be purchased and used in the educational process.

The overall process of resource allocation is a complex one: it stretches over multiple time periods; its various segments overlap one another; it is highly interrelated with other aspects of school organization; administrators have varying degrees of control over its different aspects; and its linkages with student outcomes are often indirect. However, as one of the specific elements of school organization, resource allocation decisions are critical administrative functions.

Within the resource allocation process there are four types of allocation decisions that have to be made. These are:

1. The overall level of resources that will be provided to the school.
2. The mix of different resources that will be utilized.
3. The way that available resources will be distributed across the various instructional, support, and administrative units of the school.
4. The tradeoffs that will be made among competing requests for resources within the school when the

overall level of resources is insufficient to satisfy all legitimate requests.

For a given school, the allocation decisions that are actually made are presumed to reflect the school's preferences; those areas most important to the individuals and groups making the resource allocation decisions will receive priority in funding. This implies that principals and other school administrators are seeking to obtain, distribute, and manage their available resources in a manner that maximizes instructional and organizational outcomes. However, high schools are part of the districts in which they are located and are subject to district policies and regulations, such as the overall level of financial support available to the district, the adopted district budget, personnel policies, district labor contracts, and community demands.

In spite of these constraints, there can be substantial flexibility for high school administrators who decide which resources will be selected, how resources will be used within the building, and how resources are to be distributed among the various units of the school. In particular, the amount of decision-making authority given to high school administrators can be an important element influencing the climate of the school, its organization, and the educational results the school achieves.

The variety that exists among school districts and the high schools within them as to types of students, size, economic situation, and community expectations and support can be expected

to be reflected in the resource allocation process and choices made for a given school. Therefore, there is no single "right" way of allocating resources in high schools, and this study did not attempt to find one. Instead, the investigation centered on identifying the different types of resource allccation decisions and organizational arrangements of high schools and the reasons behind them. Of particular interest were situations where high school administrators chose very different solutions to common problems in the resource allocation process.

METHODOLOGY

Selection criteria were established to provide a basis for choosing a sample of high schools to study. The criteria included the most relevant features that were identifiable from available descriptive data on high schools. The criteria included:

1. The school's budget process
2. The school's instructional organization
3. The school's administrative organization
4. The size of the school and district
5. The stability of the school's administrative team

In selecting the schools to examine in the study, an attempt was made to include a range of characteristics from each of the criteria and to include schools from several districts so that the effects of district policies could be observed. This effort was successful because a total of four high schools, located in three separate districts, agreed to participate in the study. The high schools selected had budget processes ranging from

participatory to dictatorial, a wide variety of instructional and administrative arrangements, some range in size (although none were really small schools), and principals who had been at the schools for at least four years. The three districts had different approaches and procedures that administrators followed when making resource allocation decisions at their high schools. Furthermore, the degree of flexibility principals had when determining the type and distribution of their allocated resources varied among the districts as well.

During the 1984-85 school year, the author spent considerable time observing the resource allocation processes in these four high schools. In each school, interviews with a representative group of administrators, teachers, other certified staff, and classified staff were conducted to discuss the administrative and instructional organizational structures and to learn how the budgeting process functioned. Relevant documents and other information describing the school and its policies and procedures were collected, along with budget data, memoranda, and other information related to the resource allocation process. Some of the more interesting time was spent attending staff meetings and budget meetings to observe the actual resource allocation practices in operation. Additional program and fiscal data were gathered at the conclusion of the school year to examine the final allocation of resources.

Information was obtained from each district office as well. Interviews were conducted with business managers, personnel directors, superintendents, and assistant superintendents. These discussions were used to learn about district policies and

procedures for allocation of personnel and other resources to schools, to collect guidelines and instructions utilized in the budget development process, to determine the degree of flexibility school principals had when distributing their allocations within their schools, and to obtain available budget and other data for examining resource allocation decisions.

Information and data from the school visit observations, interviews, and collected documentary material were analyzed and organized to prepare the specifications of the resource allocation process in high schools. A description of each school's process was developed. From the school data, the feasible alternative approaches that school administrators took in each component of the resource allocation process were identified and compiled into an overall description of the process. A number of quantitative analyses were conducted in order to examine and compare the choices and results for each school.

## SAMPLE DISTRICTS AND SCHOOLS

Descriptive data for the schools and districts included in the study are shown in Table 1; all schools and districts have been given fictitious names in this study. All three districts were located in close proximity to one another and faced the same general economic conditions. Two of the high schools were located in the largest district in the area, while the other two schools were in smaller districts. The expenditure levels in the districts ranged from approximately $3,250 per student to $3,730 per student, a difference of $480 per student, or 15%. The

TABLE 1

DESCRIPTIVE CHARACTERISTICS OF SAMPLE SCHOOL DISTRICTS AND HIGH SCHOOLS
1985-86

| HIGH SCHOOL NAME | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| DISTRICT DATA | EMERALD | EMERALD | RIVER | VALLEY |
| ENROLLMENT | 16,635 | 16,635 | 8,860 | 3,365 |
| COST PER STUDENT | $3,734 | $3,734 | $3,252 | $3,545 |
| ASSESSED VALUE/STUDENT | $183,000 | $183,000 | $152,100 | $171,800 |
| TAX RATE | $15.59 PER $1000 AV | $15.59 PER $1000 AV | $15.79 PER $1000 AV | $16.31 PER $1000 AV |
| NUMBER OF HIGH SCHOOLS | 4 | 4 | 2 | 1 |
| SCHOOL DATA | | | | |
| GRADES | 9 -12 | 9 -12 | 9 -12 | 9 -12 |
| SCHOOL ENROLLMENT | 1,741 STUDENTS | 1,165 STUDENTS | 1,325 STUDENTS | 984 STUDENTS |
| TEACHING STAFF | 78.9 FTE | 50.4 FTE | 65.0 FTE | 47.0 FTE |
| STUDENT/TEACHER RATIO | 21.7 | 23.1 | 20.4 | 20.9 |
| OTHER CERTIFIED STAFF | 10.8 FTE | 10.6 FTE | 6.0 FTE | 6.2 FTE |
| ADMINISTRATORS | 4.0 FTE | 4.0 FTE | 4.0 FTE | 3.5 FTE |
| CLASSIFIED STAFF | 16.3 FTE | 10.9 FTE | 14.2 FTE | 13.9 FTE |

wealth of the districts, as measured by the assessed value per student, also show parallel differences; the wealthiest district was also the highest-spending district and the least wealthy district was the lowest-spending district. The tax rates of the three districts were within $0.72 of each other.

As for the schools themselves, all were four-year high schools with grades 9-12. The enrollments ranged from 1,741 to 984 students, while total full-time equivalent (FTE) certified staff positions (teachers and other certified staff, including librarians, counselors, and media personnel) ranged from 89.7 to 53.2 in the schools. Each school had four administrative positions, although one was a half-time position in the smallest school. The staffing ratios for certified and classified positions showed some variation across the schools.

Superficially, all four high schools in the study had similar instructional organization structures. All were headed by a principal; three assistant principals divided administrative duties; three of the four high schools had a department head for each major instructional area (the traditional approach), and the other high school utilized cross-disciplinary division leaders to organize and direct teachers within the school. Table 2 describes the instructional organization in each of the four schools.

In spite of the seeming similarities among the schools, there were substantial differences in the actual functioning of the instructional organizations in the schools. Advance High School employed the traditional department head structure, and in this school the department heads played a very strong and active

TABLE 2

INSTRUCTIONAL ORGANIZATION OF HIGH SCHOOLS

| HIGH SCHOOL NAME | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| ADMINISTRATION | PRINCIPAL | PRINCIPAL | PRINCIPAL | PRINCIPAL |
| | 3 ASSISTANT PRINCIPALS<br>-CURRICULUM<br>-DISCIPLINE<br>-ACTIVITIES/ATHLETICS | 3 ASSISTANT PRINCIPALS<br>-CURRICULUM<br>-ADMINISTRATION<br>-ACTIVITIES/ATHLETICS | 3 ASSISTANT PRINCIPALS<br>-CURRICULUM & BUDGET<br>-DISCIPLINE<br>-ACTIVITIES/ATHLETICS | 3 ASSISTANT PRINCIPALS<br>-CUSTODIAL, SCHEDULING, DISCIPLINE, CURRICULUM<br>-CLASSIFIED, TESTING, DISCIPLINE, CURRICULUM<br>-ACTIVITIES/ATHLETICS |
| INSTRUCTION | DEPARTMENT HEADS | DIVISION LEADERS | DEPARTMENT HEADS | AREA COORDINATORS |
| | | DEPARTMENT FACULTY GROUP | | DEPARTMENT HEADS |
| | TEACHERS | TEACHERS | TEACHERS | TEACHERS |
| DESCRIPTION | TRADITIONAL DEPARTMENTAL STRUCTURE<br>STRONG DEPARTMENT HEADS | NO DEPARTMENT HEADS<br>CROSS-DISCIPLINARY DIVISION LEADERS | TRADITIONAL DEPARTMENTAL STRUCTURE<br>WEAK DEPARTMENT HEADS | TRADITIONAL DEPARTMENTAL STRUCTURE<br>ASST. PRINCIPALS' DUTIES SPLIT ALONG GRADE AND ACADEMIC AREA LINES |

role. Along with the administrators, they comprised a faculty council, which met regularly to decide policies and procedures for the school. There was a long-standing and strong tradition in this school of shared decision making between the administration and the department heads in matters of instruction and budget allocations.

In contrast, Central High School, which also had a department head structure, functioned on more of a "top-down" philosophy. In this school, decision making was more centralized and was the province of the principal and assistant principals. Although they sought and obtained input from department heads and teachers, the administrators were responsible for making final decisions. The department heads were used to inform teachers of school and district policies and decisions and to administer the daily operation of their instructional areas.

Delegate High School followed a different approach within a department head structure, one that fell in between the other two schools using this type of instructional organization. In this school, the departments were grouped into three areas, each with an area coordinator. Organizationally, the area coordinators were placed between the administration and the department heads. The principal and two assistant principals each had one area coordinator reporting to them, while the department heads worked through the area coordinators. The role of the area coordinators was to serve as the link between administrators and the school's faculty; specifically, their tasks within their areas were to aid in curriculum development; to coordinate the budget; to manage the supplies, textbooks, equipment, and field trip requests and

requisitions; and to disseminate necessary information about the school's policies and operations through area meetings. In essence, they functioned as super-department heads. Of interest in this structure is that by design the assistant principals had no role in the budget development or management. The area coordinators were assigned this responsibility in order to free the assistant principals for their responsibilities related to curriculum, personnel, attendance, discipline, scheduling, facilities, and student activities.

Administrators at Bridge High School had restructured the school's organization in an effort to place more emphasis on instructional improvement and to break down the traditional departmental categories of instruction. The primary administrative functions of a noninstructional nature (attendance, supervision of facilities, custodial staff, budgeting, recordkeeping, purchasing, and inventories) were assigned to an assistant principal for administration. This left the principal and the assistant principal for curriculum free to concentrate on curriculum development and supervision, teacher inservice, and other instructional leadership activities. In an attempt to encourage cross-disciplinary instructional activities, four divisions were created by grouping the instructional departments in the school. The department head positions were eliminated; instead, each division had a division leader who had the responsibility for encouraging interdisciplinary activities and assisting teachers in their divisions in improving their teaching. The administrative functions of the previous

department head positions (e.g., budget development, ordering and distribution of supplies, monitoring expenditures to stay within budget) were handled by the assistant principal for administration, who was assisted by two teachers on part-time special assignment and a budget secretary.

## THE RESOURCE ALLOCATION PROCESS

As noted earlier, there are three main components in the resource allocation process. First is the **acquisition** stage, during which the high school obtains its operating resources from the school district office. Decisions involving acquisition can be influenced by high school personnel, but the decisions on allocation amounts are made by central office administrators and the school board. Once the high school has received its allocation from the district office, the school enters the **distribution** phase, in which the resources it has been assigned are divided among the school's various instructional, support, and administrative units and operations. The final phase of the process is the **management** of the use of the resources during the school year.

The process is long and ongoing in a school district and its high schools. The establishment of policies affecting the quantity and types of resources that a high school can acquire begins up to a year in advance of the school year in which the resources will be used. The high school's internal decisions concerning the distribution of its allocated resources also must be made prior to beginning the next school year. During the school year itself, administrators must monitor expenditures

(consumption of resources) and modify the original distribution decisions to reflect actual operating conditions.

Resource allocation is the central component of the budget process in school districts and school buildings. The budget is the means of specifying and recording in monetary terms the types and quantities of resources that are involved in the resource allocation process. At the district level, the budget identifies, by various types of expenditures, the level of spending planned for the upcoming year. At the individual high school level, the budget records the resources to be utilized in each of the school's instructional departments and support areas.

Information on these activities is kept in district and school financial and personnel records. Personnel records contain information about the individuals' positions and salaries, which allows administrators to identify both the assignment of duties and the associated expenditures for personnel resources. Financial records maintain information on the planned expenditures of each organizational unit and its actual performance (i.e., whether it is over or under its budget).

This study of resource allocation examined the budgeting process utilized in each of the four high schools. However, the budgeting process, at either the district or school level, does not function in isolation from the primary purpose of schools--to educate students. Budgeting is part of the overall operation of schools; its role is to provide available resources to teachers, administrators, and support personnel, not to hamper their activities. Close attention was paid to the relationship between

the instructional organization of each high school and its approach to budgeting and managing personnel and financial resources.

ACQUISITION

The process by which a school acquires resources begins at the district level. High schools are not independent entities. They are part of a school district and subject to policies and procedures the school board, superintendent, and other central office administrators establish. Resources are provided to high schools in the form of allocations from the district office. District allocation policies vary from district to district and for different types of resources within a single district. For example, allocations for certified personnel are made in a different form than are allocations for supplies or equipment or building renovations. High school principals can try to influence the allocation policies of their districts and are sometimes successful in increasing their allocations, but they can only recommend; the decisions are made by others higher in the district management hierarchy.

The reasons for district control of the initial resource allocation to high schools is clear. School districts have to stay within their budgets; they cannot spend more than they receive in revenues. Resources cost money, and payments for resources make up the expenditures of the district. Therefore, to control spending the district must control the allocation of resources to its schools.

Resource allocation policies are established with one eye on

the cost implications of the policies and another on their educational impacts. With limited budgets and substantially more expenditure requests than are possible to fulfill, school districts must make tradeoffs between cost and program considerations. Priorities serve as a means of aiding resource allocation decisions. For example, school districts can implement policies that favor higher allocations to personnel resources than to nonpersonnel resources, that provide higher levels of resources to high schools than to elementary schools, or that fund core curriculum areas before elective subjects.

Equity among high schools is another consideration when a single district contains more than one high school. It is more difficult to explain and defend differential allocations than it is to utilize the same allocation rules for all high schools in a district. This is why most of the allocation policies establish a districtwide standard that is used to treat all high schools within the district equally. However, in some cases, this equal treatment is not "fair" treatment. For example, high schools with large concentrations of students with learning problems may need additional staff for remedial courses to bring these students' skills up to average or even minimal levels. Another example occurs when a school with older buildings needs more funds for maintenance and renovation than a school with newer buildings. In such cases, district policies may allow for other types of allocations based on "need" rather than equality of treatment.

## Personnel Allocations to the High School

Personnel are the single most important resource the high school receives, and their salaries make up the largest portion of the budget. District administrators and the school board usually pay close attention to the allocation policies for determining how many teachers, administrators, and classified staff each high school employs. Personnel are typically allocated to schools on the basis of enrollments in each school. Larger schools will receive more positions to serve the greater number of students enrolled in the school.

Teachers. Teaching positions are allocated to schools based on a standard student/teacher ratio established by the school district. The ratio, which is determined by the school board or superintendent, is a compromise between reducing class sizes (lower ratios and presumably higher-quality instruction) and reducing costs (higher ratios, fewer teachers, and lower costs). To calculate the number of teaching positions assigned to a particular school, the district office divides the estimated enrollment for the upcoming year by the standard student/teacher ratio. For example, a school with 1,855 students and a standard student/teacher ratio of 21.3 for the district would qualify for 87.1 full-time equivalent (FTE) teaching positions (1855/21.3). One point to note is that the school's allocation is in terms of FTE positions, not salary amounts. This leaves the principal free to base teaching assignments on teacher qualifications rather than on the instructional costs of assigning senior (and more highly paid) teachers to a particular department.

Among the three sample districts in the study, the standard

student/teacher ratio used ranged from 18.5 to 21.3 students per teaching position. These allocation policies, along with others used by the districts, are shown in Table 3.

Other Certified Personnel. Teachers are not the only certified personnel that schools need. Other positions, such as librarians, counselors, supplementary instructional specialists, and media specialists, are necessary for a high school to function adequately. These positions can be assigned to schools in several ways. A common approach--and the one the districts in this study used--is to include these other certified positions with the teacher allocation. This requires an adjustment to the district's standard student/teacher ratio to allow for the inclusion of the additional positions. For example, the 19.1 ratio of Emerald School District was established to provide for an average class size of approximately 22 students per teacher and to allow for additional certified support personnel in the school.

Another possible means of allocating other certified personnel positions to high schools is to establish a separate student/staff ratio for the group of positions in the school or to establish separate ratios for each type of position. A final way of determining the allocation is for the district to establish a number of positions to be allowed in each school. While the high school's enrollment would certainly be a significant factor in setting the final number of positions, this approach leaves an opportunity for differential staffing across schools to account for the needs of each school.

TABLE 3

DISTRICT ALLOCATIONS TO HIGH SCHOOLS
1985-86

| DISTRICT (HIGH SCHOOL) | EMERALD (ADVANCE) | EMERALD (BRIDGE) | RIVER (CENTRAL) | VALLEY (DELEGATE) |
|---|---|---|---|---|
| PERSONNEL | | | | |
| TEACHERS | 19.2 STUDENT/TEACHER | 19.2 STUDENT/TEACHER | 21.3 STUDENT/TEACHER | 18.5 STUDENT/TEACHER |
| OTHER CERTIFIED PERSONNEL | INCLUDED WITH TEACHER ALLOCATION | INCLUDED WITH TEACHER ALLOCATION | INCLUDED WITH TEACHER ALLOCATION | INCLUDED WITH TEACHER ALLOCATION |
| CLASSIFIED STAFF | 115 STUDENTS/POSITION | 115 STUDENTS/POSITION | MONTHLY: 14,920 HRS/YR<br>HOURLY: 137 HRS/WK | 83 STUDENTS/POSITION<br>(1.0 FTE EQUALS 40 HRS/WK) |
| ADMINISTRATORS | 1 PRINCIPAL AND<br>3 ASSISTANT PRINCIPALS<br>PER HIGH SCHOOL | 1 PRINCIPAL AND<br>3 ASSISTANT PRINCIPALS<br>PER HIGH SCHOOL | 1 PRINCIPAL AND<br>3 ASSISTANT PRINCIPALS<br>(INCLUDED WITH TEACHER ALLOCATION) | 1 PRINCIPAL AND<br>2 ASSISTANT PRINCIPALS<br>0.5 ACTIVITY/ATHLETIC DIR. |
| SUPPLIES (INCLUDES TEXTBOOKS & LIBRARY BOOKS) | $91.66 PER STUDENT<br>(COMBINED WITH EQUIPMENT FOR SINGLE LUMP SUM ALLOCATION TO SCHOOL) | $91.66 PER STUDENT<br>(COMBINED WITH EQUIPMENT FOR SINGLE LUMP SUM ALLOCATION TO SCHOOL) | $80.80 PER STUDENT<br>EACH SUPPLY ACCOUNT ALLOCATED SEPARATELY | $71.15 PER STUDENT<br>SOME ACCOUNTS $/STUDENT<br>OTHERS $ AMOUNT |
| EQUIPMENT | $48.63 PER STUDENT<br>(COMBINED WITH SUPPLIES FOR SINGLE LUMP SUM ALLOCATION TO SCHOOL) | $48.63 PER STUDENT<br>(COMBINED WITH SUPPLIES FOR SINGLE LUMP SUM ALLOCATION TO SCHOOL) | LUMP SUM $ AMOUNT FROM TOTAL DISTRICT POOL<br>AND<br>SPECIAL ALLOCATION FROM DISTRICT FUNDS | SCHOOL REQUEST BY PRIORITY<br>NO ALLOCATION FROM DISTRICT |

Classified Staff. High schools also need classified staff to operate and maintain their programs. Staff positions can include secretaries, clerks, aides of all types, and custodians. Districts use different procedures for assigning these types of positions. The allocations can be based on standard student/staff ratios (Emerald School District), on a standard factor that calculates the number of hours per week (Valley School District) or hours per year (River School District) for classified positions, or on a direct assignment of positions to each high school. To ensure proper coverage of classified duties, districts may also specify that each high school has to maintain certain positions. For example, Valley School District requires its high school to employ from its classified staff allocation a minimum of one each of the following: a secretary, a receptionist, an attendance clerk, and a bookkeeper. These minimum requirements do not use up the high school's entire classified staff allocation, and additional secretaries and aides for the library, cafeteria, and classrooms are hired from the remaining portion of the allocation.

Administrators. There are certain administrative and management functions that need to be carried out regardless of the size of the school; therefore, administrators are not assigned to high schools strictly on the basis of enrollment. Instead, each high school is assigned a complement of administrators. This usually consists of a principal and several assistant principals. There may be some variation, based on school size, in the number of assistant principals, but these variable allocations cover broad ranges in student enrollment

rather than specific numbers of students. For example, a high school with 900 to 1,500 students may qualify for a principal and three assistant principals, whereas a high school with more than 1,500 students may receive an additional assistant principal.

The four high schools in the study all had similar administrative allocations from their district offices in spite of their size differences (even in the same district). The two high schools in Emerald School District and the one in River School District each had one principal and three assistant principals, while the high school in the Valley School District had a principal and 2.5 assistant principals.

Supply and Materials Allocations to the High School

Supply and material items include all instructional and administrative supplies, textbooks, library books, and periodicals. Funds to purchase these types of items are generally allocated to high schools on a dollar-per-student basis. The underlying rationale for this that 1) each student will require a certain amount of supplies or materials on average across the school population, and 2) the variation in the types of supplies that each school needs makes it easier and more practical for the district to make a dollar allocation to the school than to specify amounts for particular supplies.

However, within this general approach there are several variations possible. The most flexible method is to allocate to the school a single lump sum based on the district's standard dollar-per-student amount for supplies, multiplied by the number of students in the school. It is also possible to combine the

allocation for equipment with the allocation for supplies to provide the school with a fixed amount of money to spend in these areas. The high school administrators then make the determination of how much of its lump sum allocation to spend in each category.

Other approaches have separate dollar-per-student allocations for various types of supplies in order to provide a guide for high school expenditures in each area. For example, one of the districts in the study provides individual building allocations for instructional supplies, operational supplies, textbooks, library books, rebinding, library periodicals, professional periodicals, classroom periodicals, dictionaries and encyclopedias, audiovisual supplies, and miscellaneous items. While the high school receives a dollar amount for each of these categories, money can be transferred from one category to another (with the district office's approval) during the budget-making process or during the school year. Such an arrangement allows high schools to meet their actual spending requirements.

Equipment Allocations to the High School

Equipment allocation procedures can show the greatest variation in district practices. This point is illustrated by the range of different approaches utilized by the sample school districts in this study. Emerald School District combined the school's equipment allocation (based on a dollar-per-student amount multiplied by the number of students in the school) with the supply allocation amount to give the school a lump sum to be distributed among supply and equipment items as needed. River

School District provided the school with a lump sum allocation for equipment. This amount was based on a share of the total money available for equipment in the district and was restricted to purchases of equipment items only. Valley School District made no initial allocation of equipment funds to the school. Instead the school was asked to submit its request for equipment items in order of priority. No limit was placed on the size of the total request, but the district would only approve those items for which funds were available. The equipment list submitted by the high school totaled over $100,000, and the district was able to fund almost three-quarters of the requested items.

Allocations for Other Items

Not all of the monies allocated to a high school are included in the personnel, supply and material, or equipment allocations. In some instances, additional funds can be provided to high schools out of another budget source in the district. A common situation is a one-time allocation for a special purpose that the district and high school are trying to achieve. The most recent example is the introduction of microcomputers into high schools. Microcomputer hardware, software, and furniture are expensive items that the high school could not normally purchase out of its regular allocation amounts without severely disrupting and impoverishing other instructional and support programs. To solve this problem, the district can make a one-time allocation to the high school to fund the extraordinary costs. The monies for the special purpose (or the items

themselves) are provided to the high school, in addition to its regular supply and equipment allocations. This permits the school to introduce new programs while it maintains normal funding for existing operations.

Another special allocation procedure is for the district office to solicit from all the district's schools competitive requests for particular funds. For example, there may be an overall amount of money which is available for all building repair and remodeling to be done in the district. If this amount is not sufficient to meet all of the building needs (and it rarely is), then schools may be asked to submit proposals for the use of the funds in their buildings. Once the district office receives all of the proposals, district administrators decide which requests will be funded in the next year. Considerations for selecting particular requests include safety, district priorities, number of years the request has been deferred, and equity among the different school buildings.

## DISTRIBUTION OF RESOURCES WITHIN THE HIGH SCHOOL

After the district allocates resources to the high school, the next phase begins--that of distributing those resources among the various instructional, support, and administrative units of the school. This is, in essence, the budgeting process <u>inside</u> the high school. The purpose of this phase is to decide who gets how much from the school's available resources.

## Approaches to High School Budgeting

A wide variety of internal budgeting arrangements is possible for high schools. At one end of the spectrum, a school can utilize a participatory approach by involving as many staff members as is feasible in the decision-making process. At the other end, a dictatorial structure, in which the principal functions as the sole decision-maker for the entire school, is also possible. In between these positions are several intermediate approaches incorporating elements from both the participatory and centralized structures. Each approach has its advantages and disadvantages. A participatory approach, if properly executed, can provide an understanding and acceptance of the limitations of inadequate resources and can result in positive feelings of staff ownership of the final results. However, this approach is much more time-consuming and requires that staff members be willing to compromise their individual interests for the good of the total school. A danger is that the participatory process will lead to staff disagreements, disputes, and polarization, which can lower morale and hinder future working relationships within the school. Additionally, a participatory process means sharing administrative power with others because principals must let teachers and other staff members help make some resource allocation decisions. Before embarking on this approach, principals must be willing to relinquish some of their authority, to work to make the process succeed, and to live with the outcomes.

A centralized decision-making process within the high school provides the administrators with stronger control over the manner

in which resources are distributed. The amount of time school staff spends on the school on budget matters is greatly reduced, and the process is more efficient in that sense. However, the tradeoffs are less staff commitment, loss of information on which to make better allocation decisions, and possible alienation or resentment by departments or staff members who feel mistreated by the administrative decisions.

Factors Influencing High School Budget Structure

Several factors will affect a principal's choice of budgeting structure to use in a high school. Tradition is an important consideration. Even if it is not completely satisfactory, the process that has been used in the past at least has the advantage of being known by school personnel. Those who feel that they benefit from the present structure will want to see it maintained, while others may see a change as an opportunity to improve their situation. In any event, the existing budget structure in a high school is the starting point in the distribution process. A decision has to be made on whether to keep the old system, whether to make minor modifications, or whether to change to another system entirely.

The staff members' expectations and abilities are also important, although these will be conditioned by the staff's past experiences. If teachers and others are willing and able to spend the time to prepare, analyze, review, debate, and make decisions about budget requests for the school's departments, a participatory process can function well. However, if they are unable or unwilling to become actively and effectively involved

in the school budgeting process, then it may be better not to involve them in the decisions. ("It's the administrators' job," teachers often respond. "That's what they get paid to do.")

Another important aspect of a high school's approach to budgeting is the management style of its administrators, particularly the principal. Principals who are comfortable with delegating authority can function effectively with a participatory approach that places some of the responsibility for making budget allocation decisions on other staff members. Principals who wish to maintain more control and to prescribe the priorities of the school will be more comfortable with a centralized budget structure.

The budgeting process does not function in isolation from the rest of the school's operation. Decisions on curriculum offerings and teaching methods have immediate budgetary consequences. Conversely, decisions on how to distribute the available resources within the school impact the capability of instructional departments. As a result, it is important that the instructional and the financial decision-making structures in a school be compatible. This means generally that similar decision-making processes be used when different groups are involved and that there is clear communication between those making curricular decisions and those making budgetary allocations. For example, a decision to teach English composition by utilizing word-processing programs to allow extensive editing and rewriting must be matched with budget decisions to support the new approach (e.g., purchase of

additional microcomputers to allow sufficient access for students, purchase of appropriate software, training of staff in the use of the new word-processing programs, and so forth).

## Examples of High School Budgeting Organizations

The four schools in the study illustrate a range of school-level budgetary structures, ranging from participatory to centralized. Their budgeting organizations are shown in Table 4.

**Advance High School** utilizes a participatory approach in its internal distribution of resources. Administrators have been using this approach for many years; the participants are familiar with the process and their roles, so the process functions smoothly. The department heads, with the assistance of teachers in their instructional department, are responsible for preparing departmental budget requests. The department heads, leaders of support units, and the four school administrators meet as a group--the faculty council--to discuss and decide the allocation of resources within the school. The faculty council is technically advisory to the principal, but in practice it is the school's key decision-making body in the school. The principal, to emphasize the council's responsibility and to keep the trust that has been developed in the process, makes a point of not changing the faculty council's allocation decisions.

**Bridge High School** was in the middle of changing its budget process during the time of the study. Under the new plan, each teacher submits an individual budget request to the assistant principal for administration. Teachers receive assistance in the preparation of their budget requests from a division leader

TABLE 4

BUDGETING CHARACTERISTICS OF HIGH SCHOOLS

| HIGH SCHOOL NAME | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| CHARACTER OF ALLOCATION PROCESS | PARTICIPATORY | DIRECTED PARTICIPATORY | CENTRALIZED | DELEGATED |
| BUDGET ORGANIZATION | TEACHERS | TEACHERS | TEACHERS | TEACHERS |
| | DEPARTMENT HEADS | DEPARTMENT FACULTY GROUP | DEPARTMENT HEADS | DEPARTMENT HEADS |
| | | ASSISTANCE FROM DIVISION LEADERS & BUDGET ASSISTANTS | | |
| | | ASSISTANT PRINCIPAL - ADMIN. | | |
| | FACULTY COUNCIL | BUDGET COMMITTEE | ASSISTANT PRINCIPAL | AREA COORDINATORS |
| | PRINCIPAL | PRINCIPAL | PRINCIPAL | PRINCIPAL |

(curriculum) and/or a budget assistant as needed. School administrators aggregate the individual teacher requests by instructional department. A budget committee, made up of representatives of the administration, instructional areas, support staff, and teachers, reviews the budget requests and reduces them as necessary to meet available allocations from the district. In the initial year the budget committee tended to follow the direction the principal suggested; however, it is anticipated that in future years the group will become more independent as it becomes more familiar with its role.

**Central High School** utilizes a different approach to internal budgeting. The assistant principal for curriculum and budgeting reviews the past year's expenditures by instructional department. Based on this information, his knowledge of the departments' operations, and an estimate of departmental enrollments for the upcoming year, he makes a preliminary allocation of available monies to each department. The preliminary allocations are reviewed in meetings with each department head, and an opportunity is provided for the department head to make a case for modifying the original allocation amount. Once the allocation is agreed upon, the principal reviews and approves it.

**Delegate High School** also uses a departmental structure to prepare budget requests. Department heads are responsible for submitting requests that reflect the needs of the teachers in the department. The administration totals the requests and compares the total with the available allocation from the district office. The principal then delegates the task of budget review and

decision-making to the three area coordinators. Their role is to submit to the principal a total budget request for the school that is within the district allocation. The area coordinators use their knowledge of the school and its programs to make the allocation decisions and budget priorities. The principal accepts the decisions of the area coordinators and forwards the budget allocation amounts to the district office.

Personnel Allocations within the High School

The overall budgeting organizations described above apply more to the allocations of nonpersonnel resources than to decisions concerning personnel. Personnel allocation decisions are generally the principal's province, and they are not delegated to or shared with others in the school's organization. Personnel decisions involve such actions as changing the number of FTE positions assigned to each instructional department or support unit, reducing the number of particular positions to meet cutbacks in the school's personnel allocation, or reassigning personnel within the school. Before making personnel decisions, principals typically consult with other administrators in their building and with department heads or other instructional supervisors to obtain more information, to seek advice, or to prepare them for the outcomes. However, the final decision is that of the principal and is not shared.

There is a variety of reasons for this approach. At the heart of the issue is that personnel decisions affect people in potentially serious ways--change in teaching assignment, transfer to another school, and even loss of employment. Most principals

feel that it is inappropriate to have teachers sit in judgment of fellow teachers. It is bad for morale and for working relationships in the organization. Furthermore, legal restrictions can prohibit direct teacher involvement in reassignment or reduction-in-force decisions.

The basis for staffing allocation decisions is generally the enrollment patterns and changes across instructional departments in the school. This is a student-enrollment driven process, a demand- or market-based approach. Staff positions in those instructional areas that are growing in student enrollment are assigned from newly available positions or from reassigned positions from other areas. Those instructional areas that are declining in student enrollment lose positions assigned to their areas. This provides a rational and defensible basis for allocating staff within the high school.

The approaches to personnel allocation decisions are very similar for all four high schools in the study. Table 5 illustrates that the principal makes staffing decisions in consultation with the assistant principals and department heads or area leaders. The rules used for making staff allocation decisions primarily are derived from past enrollment trends and estimates of future enrollments. These are combined with either explicit or implicit standards for class size to prevent either overcrowding or inefficient use of resources. Within this general pattern, however, principals were able to exercise some discretion in shifting the staffing allocation in the direction that they believed their schools were and/or should be moving.

TABLE 5

STAFFING ALLOCATION DECISIONS

| HIGH SCHOOL NAME | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| TYPE OF PERSONNEL | | | | |
| CERTIFIED | PRINCIPAL<br>ASSISTANT PRINCIPAL<br>(DEPARTMENT HEADS) | PRINCIPAL<br>(ASSISTANT PRINCIPAL)<br>(DIVISION LEADERS) | PRINCIPAL<br>ASSISTANT PRINCIPAL<br>(DEPARTMENT HEADS) | PRINCIPAL<br>(ASSISTANT PRINCIPAL)<br>(DEPARTMENT HEADS) |
| BASIS FOR ALLOCATION | ENROLLMENT TRENDS | ENROLLMENT,<br>STUDENT SURVEYS<br>CLASS SIZE GUIDELINES | ENROLLMENTS | POSITIONS AVAILABLE<br>THROUGH RETIREMENTS<br>& RESIGNATIONS |
| CLASSIFIED | HEAD SECRETARY<br>ADMINISTRATIVE TEAM | PRINCIPAL | ASSISTANT PRINCIPAL | PRINCIPAL |



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For example, for 1985-86, administrators at Advance High School reduced the number of positions in the industrial arts department (to shift the emphasis of the curriculum), transferred positions from the language arts and social studies departments (to follow students from Advance High School who enrolled in the district's new International High School), increased the instructional positions in the physical education, health, and music and drama departments (in response to increasing enrollments), and added a librarian and a substance abuse counselor (to respond to school-wide priorities). Delegate High School, on the other hand, had less change in either total enrollment or departmental enrollments, so administrators pursued a less aggressive approach to staffing reallocations. Administrators at Delegate High School relied more on retirements and resignations to free positions than on involuntary teacher changes.

The actual staffing allocations for instruction for 1985-86 for each of the four high schools in the study are given in Table 6. In order to make comparisons without the effect of school size obscuring the schools' data, Table 7 gives the percentage of teaching staff assigned to each departmental area. Overall, the staffing patterns for the four schools are somewhat similar, with relatively large allocations to basic areas such as language arts, social studies, science, mathematics, and business, and small allocations to arts and crafts, homemaking, health, music and drama, and computers. These relative differences in allocation among subject areas are depicted graphically in Figure 1. The schools do vary in those areas that receive particular

TABLE 6
TEACHING STAFF BY DEPARTMENT (FTE)
1985-86

| DEPARTMENT | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| LANGUAGE ARTS | 14.00 | 8.20 | 10.40 | 7.83 |
| SOCIAL STUDIES | 10.00 | 7.20 | 9.00 | 5.00 |
| SCIENCE | 8.80 | 6.80 | 7.40 | 5.50 |
| ARTS & CRAFTS | 2.00 | 1.60 | 1.40 | 0.50 |
| HOMEMAKING | 1.33 | 1.00 | 1.00 | 1.50 |
| INDUSTRIAL ARTS | 2.00 | 2.20 | 7.20 | 3.50 |
| MATHEMATICS | 12.20 | 7.60 | 8.60 | 5.33 |
| HEALTH | 2.40 | 2.00 | 3.00 | 1.83 |
| PHYSICAL EDUCATION | 5.60 | 3.40 | 5.40 | 4.00 |
| FOREIGN LANGUAGE | 9.80 | 4.80 | 2.80 | 2.00 |
| BUSINESS EDUCATION | 5.00 | 3.60 | 6.40 | 7.00 |
| MUSIC & DRAMA | 3.93 | 1.40 | 2.00 | 1.67 |
| COMPUTER | 1.80 | 0.60 | 0.40 | 1.33 |
| SCHOOL TOTAL | 78.86 | 50.40 | 65.00 | 47.00 |

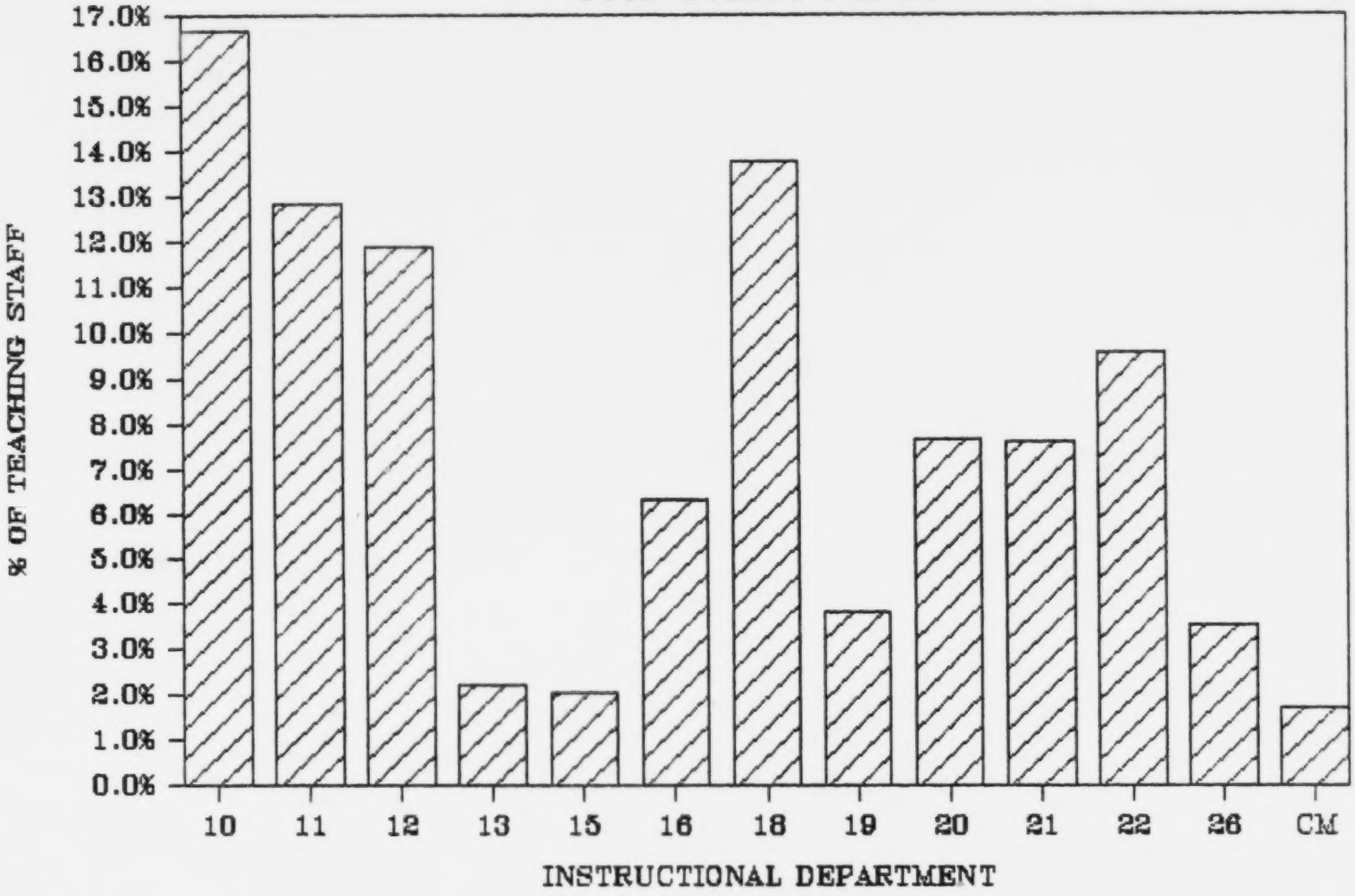
TABLE 7
PERCENTAGE OF TEACHING STAFF BY DEPARTMENT
1985-86

| DEPARTMENT | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| LANGUAGE ARTS | 17.8% | 16.3% | 16.0% | 16.7% |
| SOCIAL STUDIES | 12.7% | 14.3% | 13.8% | 10.6% |
| SCIENCE | 11.2% | 13.5% | 11.4% | 11.7% |
| ARTS & CRAFTS | 2.5% | 3.2% | 2.2% | 1.1% |
| HOMEMAKING | 1.7% | 2.0% | 1.5% | 3.2% |
| INDUSTRIAL ARTS | 2.5% | 4.4% | 11.1% | 7.4% |
| MATHEMATICS | 15.5% | 15.1% | 13.2% | 11.3% |
| HEALTH | 3.0% | 4.0% | 4.6% | 3.9% |
| PHYSICAL EDUCATION | 7.1% | 6.7% | 8.3% | 8.5% |
| FOREIGN LANGUAGE | 12.4% | 9.5% | 4.3% | 4.3% |
| BUSINESS EDUCATION | 6.3% | 7.1% | 9.8% | 14.9% |
| MUSIC & DRAMA | 5.0% | 2.8% | 3.1% | 3.5% |
| COMPUTER | 2.3% | 1.2% | 0.6% | 2.8% |
| SCHOOL TOTAL | 100.0% | 100.0% | 100.0% | 100.0% |

FIGURE 1

# % TEACHING STAFF BY DEPARTMENT

## FOUR-SCHOOL AVERAGE




10 LANGUAGE ARTS
11 SOCIAL STUDIES
12 SCIENCE
13 ARTS & CRAFTS
15 HOMEMAKING
16 INDUSTRIAL ARTS
18 MATHEMATICS
19 HEALTH
20 PHYSICAL EDUCATION
21 FOREIGN LANGUAGE
22 BUSINESS EDUCATION
26 MUSIC & DRAMA
CM COMPUTER

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curricular emphasis in a school. Relative to the other schools, Advance High School, which emphasizes academics, has low percentages of its teaching staff assigned to industrial arts and to business; instead, it has more staff assigned to music and drama and to foreign languages. (Advance High School presently offers French, Spanish, Japanese, Chinese, Russian, and German.) In contrast, Central and Delegate High Schools emphasize their business and industrial arts departments and assign relatively fewer staff to foreign languages.

For classified positions, the allocation decisions are also very centralized. At Advanced High School, the assignment of classified staff is consistent with the principal's philosophy of delegating responsibility: the head secretary makes the initial assignment and the administrative team (principal and assistant principals) then approves it. At the other schools, either the principal or assistant principal makes the classified staff allocations.

Supply and Equipment Allocations within the High School

For supply and equipment funds, the common procedure is for high schools to receive a lump sum allocation from the district. This procedure requires each high school to establish an internal decision-making process for supply and equipment allocations among its various instructional departments, support units, and administrative activities. Typically, the accounting format for school budgeting requires that distribution of supply and equipment money be specified by the general categories of supplies, new equipment, and replacement equipment for each

department in the school. The supply items are usually shown in a dollar amount only, while each piece of equipment is specified individually.

Although some districts may exclude equipment, textbooks, or special allocations for computers from this process, those involved in high school budgetary matters have the flexibility to allocate a good proportion of their nonpersonnel resources among their departments as they choose. In contrast to the personnel allocation decisions, which the administration generally makes, the supply and equipment budget provides the primary opportunity for other high school staff members to participate in the budget process. The extent of staff involvement varies widely from full-fledged decision-making to the opportunity to request changes in the departmental allocation established by a school administrator. Table 8 outlines the approaches and procedures used in the four high schools, and the specific budget process for each of the four high schools is discussed below.

Advance High School. Budget requests for all supply and equipment monies are prepared by each instructional department and support unit under the direction of the department head or unit leader. The budget requests cover all supply and equipment items for the school--general instructional supplies, textbooks, library books, reference books, periodicals, equipment, computers, and media items. As a first step, the administration distributes all of the budget-related information it has--district instructions and timelines, historical allocation amounts by department, enrollments, the lump sum amount provided

TABLE 8

SUPPLIES AND EQUIPMENT BUDGET REQUEST PROCEDURES

| HIGH SCHOOL NAME | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| **INSTRUCTIONAL SUPPLIES AND EQUIPMENT REQUESTS** | | | | |
| INITIATED BY | TEACHERS | TEACHERS | ASSISTANT PRINCIPAL | DEPARTMENT HEADS |
| SENT FOR REVIEW TO | DEPARTMENT HEADS | ASSISTANT PRINCIPAL | DEPARTMENT HEADS | AREA COORDINATORS |
| ALLOCATION DECISIONS MADE BY | FACULTY COUNCIL | BUDGET COMMITTEE | ASSISTANT PRINCIPAL | AREA COORDINATORS |
| **MEDIA AND COMPUTER REQUESTS** | | | | |
| INITIATED BY | LIBRARY WITH INPUT FROM TEACHERS & DEPT HEADS | LIBRARY WITH INPUT FROM TEACHERS & DIVISION LEADERS | ASSISTANT PRINCIPAL | MEDIA SPECIALIST |
| ALLOCATION DECISIONS MADE BY | FACULTY COUNCIL | BUDGET COMMITTEE | ASSISTANT PRINCIPAL | PRINCIPAL |
| FINAL AUTHORITY | PRINCIPAL | PRINCIPAL | PRINCIPAL | PRINCIPAL |



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to the high school for supplies and equipment--to all staff members. The department head works with the other teachers in the instructional department either as a group or individually to determine their supply and equipment needs for the upcoming year, the estimated cost of purchasing the requested items, and the priorities of the individual budget items. The priorities are not specified in the departmental requests, but it is expected that department heads will be able to speak in behalf of and make decisions for their departments and their members if it becomes necessary to reduce their request during the budget process. The librarian, in consultation with the department heads, develops the budget request for all textbooks, library books, and audio-visual items, including computers. The principal prepares the administration's request for supply and equipment monies. All departmental budget requests are submitted to the school business manager for consolidation into a master list for the school. Copies of the master list are provided to all department heads, along with a two-year expenditure record of supplies and equipment by department for historical comparison.

Inevitably, the total of all budget requests from the different departments exceeds the school's supply and equipment allocation. For example, for 1985-86 the total requests were $313,819, while the district allocation amount was only $250,979. This meant that the excess, $62,840, had to be cut from the budget requests. The cuts (i.e., the resource allocation decisions) are made in a meeting of the school's faculty council; it is comprised of the administrators, department heads, and support unit leaders. The budget meeting is a marathon session;

it begins after school and continues until all necessary cuts have been made. The meeting frequently lasts six or more hours, and dinner is served during the meeting to allow it to continue with minimal interruption.

Attendance at the meeting is voluntary and anyone can leave at any time, but all members attend and stay because they represent their departments' interests and because the results of the meeting are binding. The meeting functions with a minimum of discord because most of the department heads have been involved in this process for several years and have learned how to work together. The role of the department heads is critical; they have to stand up for their department to ensure that they are treated fairly, and, at the same time, they have to be willing to compromise along with others in the meeting to reach the budget target. The role of the principal and other administrators is to argue for the administration's budget request (although not too strenuously), to provide information, to ask questions, to make suggestions, and to facilitate the discussion by keeping the comments on the issues at hand and away from personal attacks. The administrators do not dictate to the department heads how the allocation decisions are to be made, even for the administration's budget request. Both the principal and the department heads accept the final budget allocation figures as negotiated during the meeting.

The format of the meeting requires each department head to present the department's budget request and to answer any questions about it. After each departmental request has been

explained, the department heads, in turn, offer reductions in their budget request or make a case why reductions should not be made. During this round, department heads also question other department requests and suggest cuts in others' budgets as well. The administration's budget request is considered along with all of the others; no special treatment is given to it, although the administration's budget amount includes a contingency fund which is used for departmental requests during the year to meet unexpected situations. During the meeting, the business manager keeps a running tabulation of the budget reductions agreed to and the amount of reductions still needed. The meeting proceeds until all of the necessary budget cuts have been made and the total high school budget request for supplies and equipment matches the district allocation amount.

Bridge High School. The budget process for supplies and equipment begins at the first of the school year at Bridge High School. At the front of the staff handbook each teacher receives at the beginning of the year is a set of budget request forms, which each teacher uses to make supply and equipment requests for the upcoming year. The individual teacher requests are submitted to the assistant principal for administration, since Bridge High School has eliminated the department head position in the school. The librarian, with input from individual teachers and division leaders, coordinates the planned expenditures and develops budget requests for media and microcomputer items used by many teachers throughout the school. The requests are aggregated by the traditional instructional departments to match the state school

accounting system.

The principal initiates the budget allocation process by distributing to all staff members the budgeting procedures memorandum. The memorandum provides the names of the budget committee members, a timeline with meeting dates and suggested agendas, recommended budget priorities, and past and current expenditures for supplies, textbooks, equipment, and computers. The budget committee is composed of the principal, the assistant principals for curriculum and for administration, the division leaders, the librarian (media), two budget assistants (teachers on special assignment), and one teacher volunteer (more were requested, but only one volunteered). The role of the budget committee is to review the budget requests and to decide upon the necessary cuts in order to reduce the total to the amount allocated to the school for supplies and equipment. The total budget request made by the school staff was $240,220, but the budget allocation was $168,488, which meant that $71,732 had to be cut from the requests.

The budget committee held four to five short meetings after school; these meetings lasted approximately one hour each. The principal served as the chair of the committee and conducted the meetings. At the first meeting, the committee established its operating procedures, accepted the budget priorities the principal suggested, reviewed the budget requests, and noted areas where additional information was needed. The following meetings were devoted to detailed reviews of requests for textbooks, library books, supplies, replacement equipment, new equipment, and computers. Tentative agreement was reached on the

cuts in each area as that area was reviewed, but final decisions were not made until the last meeting. After each meeting the original budget requests and the tentative results were posted on the faculty bulletin board so that all staff members could follow the progress of the budget decisions. The budget committee meetings were open to all faculty members who wished to discuss the budget decisions--particularly those decisions related to cuts in their areas--but none attended any of the meetings.

The budget committee was able, without a great deal of trouble, to reduce the budget requests to a point where the total was only $10,000 more than the school's allocation. At that point, the principal suggested to the committee that he recommend the last (and potentially most upsetting) budget cuts. The committee agreed to his offer, and at the final meeting the committee reviewed and accepted his recommended reductions.

This was the first year the new budgeting procedures were used at Bridge High School. Most of the faculty representatives on the budget committee were inexperienced in this type of shared decision making, but they learned quickly. The principal directed and controlled the process and the committee meetings by setting the agenda, by making comments and suggestions during the meetings, and by using his knowledge of where he wanted the process to go. However, rather than being a dictatorial process where the objective was to control the outcomes, the first year procedures functioned as a tutorial in which the principal taught others in the school organization how to participate in the school's decision-making process.

Central High School. The internal budgeting process at Central High School is closely controlled and directed by the principal and assistant principal for curriculum and budget. The centralized pattern in the school mirrors the more centralized pattern of control found in the relationship between River School District and its high schools. The high school receives notification of the the allocation amounts from the district office. The allocations are for specific supply accounts--general instructional supplies, textbooks, library books, library periodicals, professional periodicals, classroom periodicals, encyclopedias and dictionaries, audiovisual supplies, other instructional supplies, and supplies for the principal's office--and the district office attaches a dollar allocation to each account.

In the school's internal budgeting process, the general instructional supplies are allocated among the various departments, while the other supply items are allocated on a schoolwide basis. As a first step in the distribution process, the assistant principal compares each department's past budgets and actual expenditures to uncover any possible overfunded or underfunded areas. Based on this information, his knowledge of the departments' operations, and the projected enrollments for the next year, the assistant principal makes a tentative distribution of the instructional supply monies among the departments. The assistant principal then meets individually with each department head to discuss the department's plans and budgetary needs for the next year. Prior to this meeting the

department heads meet with the teachers in their department to discuss their needs and wants for supplies and equipment funds. After receiving input from the department heads, the assistant principal sets the allocation for general supplies for each department and forwards this information to the district office and to each department head. Included in the distribution is an amount--usually 5 to 10 percent of the total instructional supply amount--for contingencies. The department heads are aware of the contingency fund and can, if necessary, request additional funding for unforeseen events.

The librarian is responsible for ordering textbooks and works with the department heads to plan adoption-year purchases (major amounts) and nonadoption-year purchases to replace lost books (small amounts). This process helps the school stay within the overall textbook allocation. Library book and periodical orders are also handled by the librarian, who consults with and receives requests from individual teachers for materials they wish to utilize in their courses and assignments.

At Central High School, any allocations for equipment are treated separately and are not combined with supplies, as is the case at Advance and Bridge High Schools. Due to a tight budget and a fiscally conservative district administration, this was the first year in five years that Central High had received monies for equipment from the district general fund. The district office informed the high school of a dollar amount ($12,000) allocated to it for equipment and asked for a prioritized list of equipment requests to be returned within two weeks. The assistant principal informed the department heads that "a little

bit of money" was available for equipment and solicited their requests for three or four low-cost items. The department head requests exceeded the available allocation, and the assistant principal went back to several department heads to request reductions. The completed list of equipment requests (within the allocation amount) was submitted to the district office. The district then sent the high school another notice requesting a 20 percent cut in the previously submitted equipment list. The assistant principal, working again with the department heads, made the cuts and resubmitted the request, which was funded.

An extraordinary circumstance occurred this year with regard to funds for equipment. After the initial small allocation was made, the district decided to make a major investment in equipment and computers for its schools to make up for years of shortages. Thus, the district established new accounts, over and above the high school's original allocation, for microcomputer and equipment purchases. From the microcomputer account, a new microcomputer laboratory (hardware and software) and two administrative computers were purchased for the high school. Furthermore, the high school was informed that there was approximately $225,000 available for new capital expenditures this year. The principal worked with the department heads to develop a list of capital project needs for the school (new and replacement equipment as well as new and remodeled building requests). These are currently being submitted to the district office for approval once agreement is reached at the school level. This represented a major change in the financial fortunes

of the high school and is being used to catch up on the backlog of instructional equipment and facility needs.

Delegate High School. The budget process at Delegate High School combines several different features that were used in the other high schools studied. Although Delegate High School has a traditional instructional department structure with department heads, the school also has three area coordinators that have authority over the department heads in budgetary affairs. Each area coordinator functions as the budget administrator for one-third of the academic departments; thus, the assistant principals in the school are not involved in the budget process. The duties of the area coordinators are to coordinate budget requests from departments, decide upon the allocations of supply monies among the competing requests from departments, monitor spending during the year, and arrange field trips. Two of the three area coordinators are also department heads.

The internal school budget process begins when the principal receives from the district office a total dollar amount for supplies for the entire school. The principal sends out a budget memorandum to all staff in the school; it contains a description of the budget accounts, the basis for the district allocations to the high school, the amounts that the school has been allocated, and budget request forms for teachers to use. The budget requests include estimates for instructional supplies, maintenance and rental of equipment, field trips, remodeling or additions to facilities, and new and replacement equipment. Written justification for requested equipment expenditures is

required. The teachers complete their requests and submit them to their department head for review and compilation. The departmental budget requests for supplies are submitted to the appropriate area coordinator, who screens them for accuracy, proper coding, and reasonableness.

The three area coordinators meet as a group to decide upon the supply allocation amounts for each department. Their job, as assigned by the principal, is to reach a final supply allocation among the departments that does not exceed the total amount allotted to the school. Other than that, they do not have further direction or constraints from the principal. Their decisions are submitted to the principal for approval and then transmitted to the district office. The principal deliberately stays out of the allocation process. His responsibility is to make sure that the final school request for supplies is within the amount the district allocated, and he believes that it is more appropriate for others to make the distribution decisions.

The media supply requests are prepared by the school's media specialist in coordination with department heads and individual teachers. These requests include library supplies, audiovisual materials, textbooks, library books, periodicals, and computer software. Since the instructional supplies and media come out of the same district allocation and are prepared independently by the area coordinators and by the media specialist, the principal has to make sure that the total of the two budgets is within the limitation. Any overages are sent back to the area coordinators and media specialist with a request to cut the necessary amounts.

Equipment requests are also part of the responsibility of

the area coordinators. They review and prioritize the equipment requests received from the departments. The prioritized list is submitted to the principal, who reviews it, modifies it if necessary, and submits to the district office. The district provides no guidelines or dollar-per-student target amount for estimating a reasonable total equipment request for the school. Because all equipment requests require written justification, the preparation of equipment requests can be a lengthy effort, with no assurance of success.

Computer purchases are not part of the high school's base budget allocation. There is a special district allocation to fund computer purchases. The principal has established an instructional technology committee in the high school to decide upon a plan for utilizing microcomputers in the classrooms and to determine how computer funds will be spent. The budget requests for computers come out of this committee's plan and are submitted to the district office for funding.

The principal at Delegate High School has created a budget structure that is consistent with his view of his role. He receives and carries out district directives concerning budget procedures. He passes along to the school's staff information and spending limits established by the district for the staff's use in making allocation decisions. The principal reviews, approves, and transmits to the district office all staff decisions. Finally, the principal will lobby, forcefully if necessary, for additional funds for the school or for specific faculty or programs if the requests can be justified.

A final note on the budget structure at Delegate High School is that the process was changed this year. The area coordinators were eliminated, primarily because teachers complained about the extra layer of administration they represented and about the reduction in direct communication with the principal and vice principals. The school is now using a faculty council structure similar to that used at Advance High School. In fact, the Delegate principal visited Advance High School to observe its process in action prior to making the change.

## Results of the High School Allocation Processes

In spite of the quite different approaches each of the four high schools used to make internal allocations, each ultimately reached its decisions on how much money to provide to each instructional, support, and administrative unit. This section presents the results of those decisions. Additional results for individual schools are provided in Appendixes A, B, C, and D.

One of the key factors influencing resource allocation decisions in high schools is student enrollments. The number of students not only determines the resources allocated to the high schools from the district office but also guides the internal resource allocation decisions as well. Table 9 presents the numbers of students enrolled in courses in each instructional department for the four high schools. A student is counted in each course or period he or she takes in a given departmental area. For example, a student taking Typing I, Accounting I, and Introduction to Marketing courses would be counted three times in the business department, once for each course. The counts,

TABLE 9
STUDENT-PERIOD ENROLLMENTS BY DEPARTMENT
1985-86

| DEPARTMENT | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| LANGUAGE ARTS | 1,587 | 1,026 | 1,240 | 964 |
| SOCIAL STUDIES | 1,343 | 968 | 1,128 | 689 |
| SCIENCE | 1,172 | 794 | 910 | 715 |
| ARTS & CRAFTS | 255 | 211 | 167 | 79 |
| HOMEMAKING | 148 | 135 | 82 | 220 |
| INDUSTRIAL ARTS | 220 | 200 | 587 | 415 |
| MATHEMATICS | 1,546 | 1,019 | 1,054 | 762 |
| HEALTH | 322 | 215 | 404 | 271 |
| PHYSICAL EDUCATION | 624 | 588 | 774 | 713 |
| FOREIGN LANGUAGE | 1,151 | 570 | 335 | 266 |
| BUSINESS EDUCATION | 675 | 438 | 798 | 896 |
| MUSIC & DRAMA | 503 | 162 | 236 | 233 |
| COMPUTER | 137 | 65 | 17 | 164 |
| SCHOOL TOTAL | 9,683 | 6,391 | 7,732 | 6,387 |
| SCHOOL ENROLLMENT | 1,741 | 1,165 | 1,325 | 984 |
| CLASSES PER STUDENT | 5.6 | 5.5 | 5.8 | 6.5 |

therefore, represent student-period enrollments in each department.

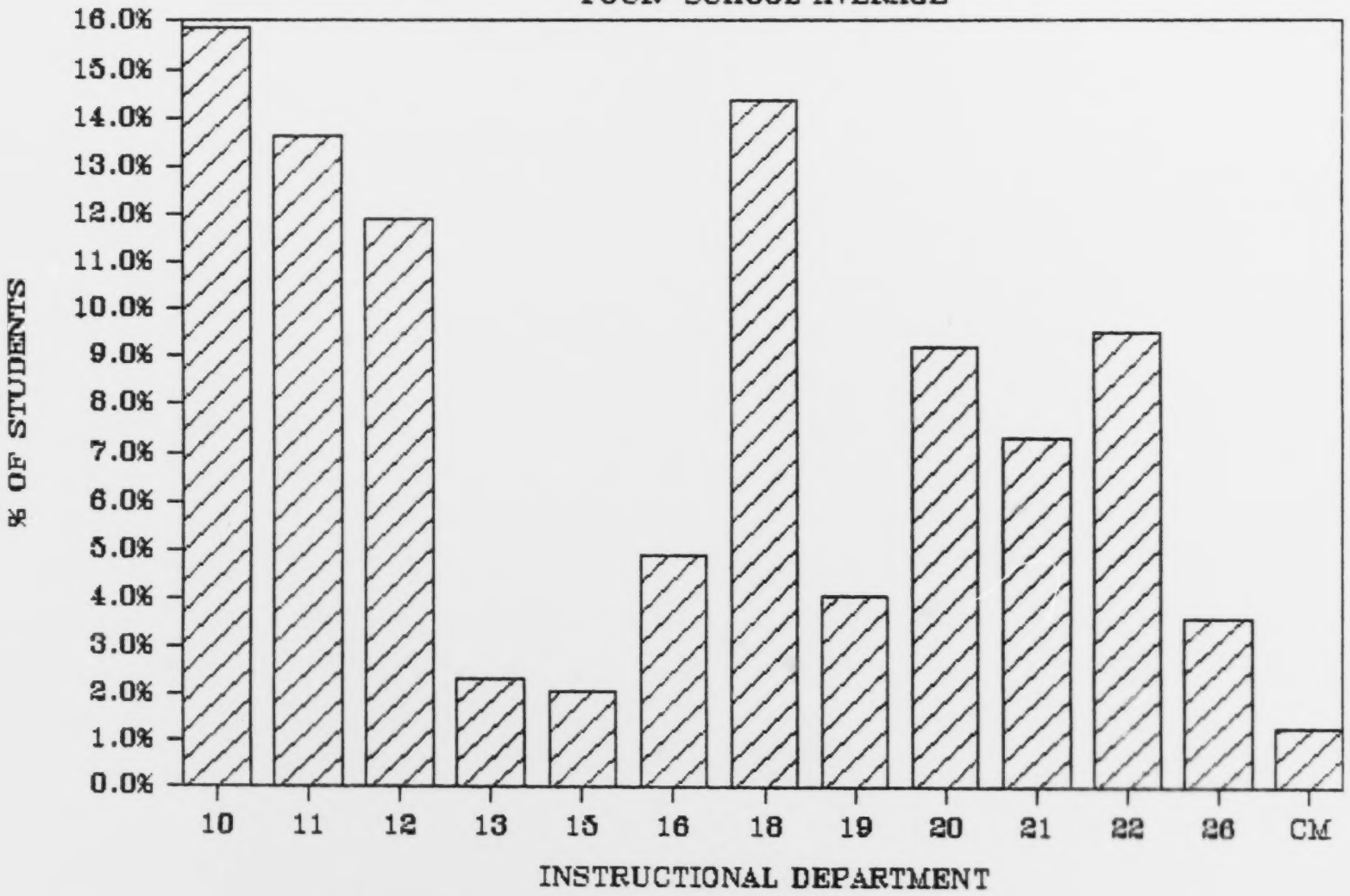
To illustrate the differences among the different instructional departments, Figure 2 graphically shows the average proportion of the student enrollments in each instructional department. The basic areas--language arts, social studies, science, and mathematics--have the highest enrollments, followed by physical education and business, and, to a lesser extent, foreign languages, with the lowest enrollment areas being arts and crafts, homemaking, industrial arts, health, music and drama, and computers. The last area, computers, is somewhat misleading because it is not a separate instructional department in the high schools and only those courses strictly devoted to computer subjects, such as Computer Programming and Computer Science, are counted in this area. Even though many departments utilize computer applications in parts of their instructional programs (e.g., word-processing programs in English Composition), these enrollments are counted with the host instructional department. Nevertheless, due to its emergence as an important topic, the emphasis on computer literacy, and the purchase of instructional computers in all four high schools, computers was designated as a separate area.

Even while conforming to the overall picture of enrollments, the four high schools exhibit in their individual patterns a reflection of the priorities and expectations of their students. Table 10 provides the percentage of students enrolled in each instructional department for the four high schools. Advance and Bridge High Schools, which tend to have a more academically

FIGURE 2

# % STUDENT ENROLLMENT BY DEPARTMENT

FOUR-SCHOOL AVERAGE




| | | | | | |
|---|---|---|---|---|---|
| 10 | LANGUAGE ARTS | 14 | INDUSTRIAL ARTS | 21 | FOREIGN LANGUAGE |
| 11 | SOCIAL STUDIES | 15 | MATHEMATICS | 22 | BUSINESS EDUCATION |
| 12 | SCIENCE | 17 | HEALTH | 26 | MUSIC & DRAMA |
| 13 | ARTS & CRAFTS | 20 | PHYSICAL EDUCATION | CM | COMPUTER |
| 16 | HOMEMAKING | | | | |



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TABLE 10
PERCENTAGE OF STUDENT-PERIOD ENROLLMENTS BY DEPARTMENT
1985-86

| DEPARTMENT | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| LANGUAGE ARTS | 16.4% | 16.1% | 16.0% | 15.1% |
| SOCIAL STUDIES | 13.9% | 15.1% | 14.6% | 10.8% |
| SCIENCE | 12.1% | 12.4% | 11.8% | 11.2% |
| ARTS & CRAFTS | 2.6% | 3.3% | 2.2% | 1.2% |
| HOMEMAKING | 1.5% | 2.1% | 1.1% | 3.4% |
| INDUSTRIAL ARTS | 2.3% | 3.1% | 7.6% | 6.5% |
| MATHEMATICS | 16.0% | 15.9% | 13.6% | 11.9% |
| HEALTH | 3.3% | 3.4% | 5.2% | 4.2% |
| PHYSICAL EDUCATION | 6.4% | 9.2% | 10.0% | 11.2% |
| FOREIGN LANGUAGE | 11.9% | 8.9% | 4.3% | 4.2% |
| BUSINESS EDUCATION | 7.0% | 6.9% | 10.3% | 14.0% |
| MUSIC & DRAMA | 5.2% | 2.5% | 3.1% | 3.6% |
| COMPUTER | 1.4% | 1.0% | 0.2% | 2.6% |
| SCHOOL TOTAL | 100.0% | 100.0% | 100.0% | 100.0% |

oriented student population, have relatively higher proportions enrolled in mathematics, foreign languages, and music and drama (at Advance High School only) with lower proportions in industrial arts, physical education, and business courses. In comparison, students at Central and Delegate High Schools show the reverse patterns.

The fact that personnel assignments are largely determined by enrollment is confirmed by a comparison of the distribution of students with the distribution of teachers in the four high schools. As Figure 3 demonstrates, those departments with high enrollments are also those with a high allocation of the teaching staff. With a few minor exceptions there is a very close correspondence between the percentage of students enrolled in a given department and the percentage of the teaching staff assigned to the department.

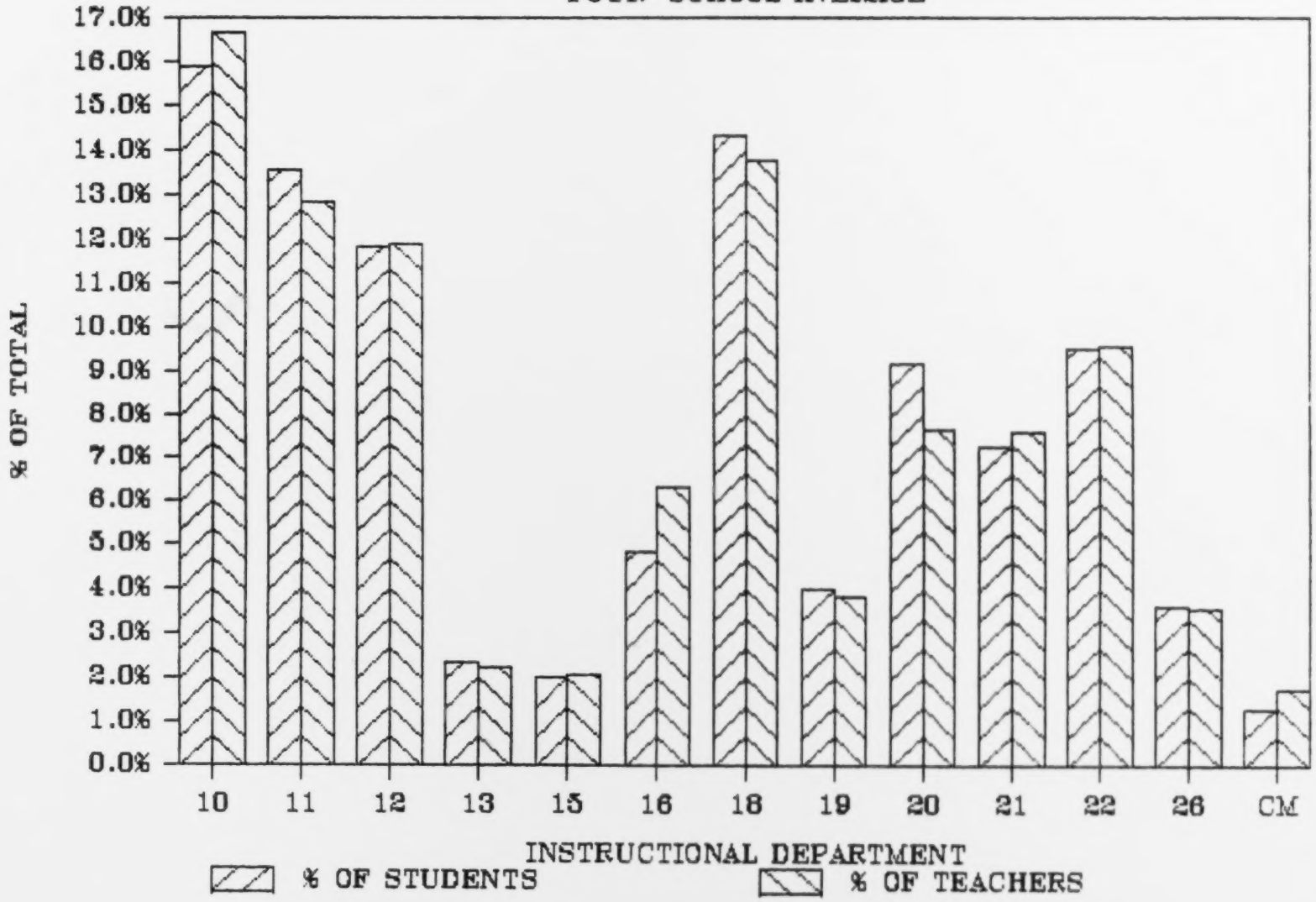
Another result of the close match between the proportions of students enrolled in and teachers assigned to each instructional area is a relative uniformity of teaching load across instructional departments. As Figure 4 shows, the average number of students taught by a teacher in the four high schools is 126, with only the physical education department being substantially above that load and only the industrial arts and computer departments substantially below. These differences result from relatively smaller-sized classes in industrial arts and computer courses and larger-sized ones in physical education.

These similarities occur even with differences in teaching assignments among the four high schools. At Bridge and Central High Schools the normal teaching load is five classes per day, at

FIGURE 3

# DISTRIBUTION OF STUDENTS AND TEACHERS

## FOUR-SCHOOL AVERAGE




10 LANGUAGE ARTS
11 SOCIAL STUDIES
12 SCIENCE
13 ARTS & CRAFTS
15 HOMEMAKING
16 INDUSTRIAL ARTS
18 MATHEMATICS
19 HEALTH
20 PHYSICAL EDUCATION
21 FOREIGN LANGUAGE
22 BUSINESS EDUCATION
26 MUSIC & DRAMA
CM COMPUTER







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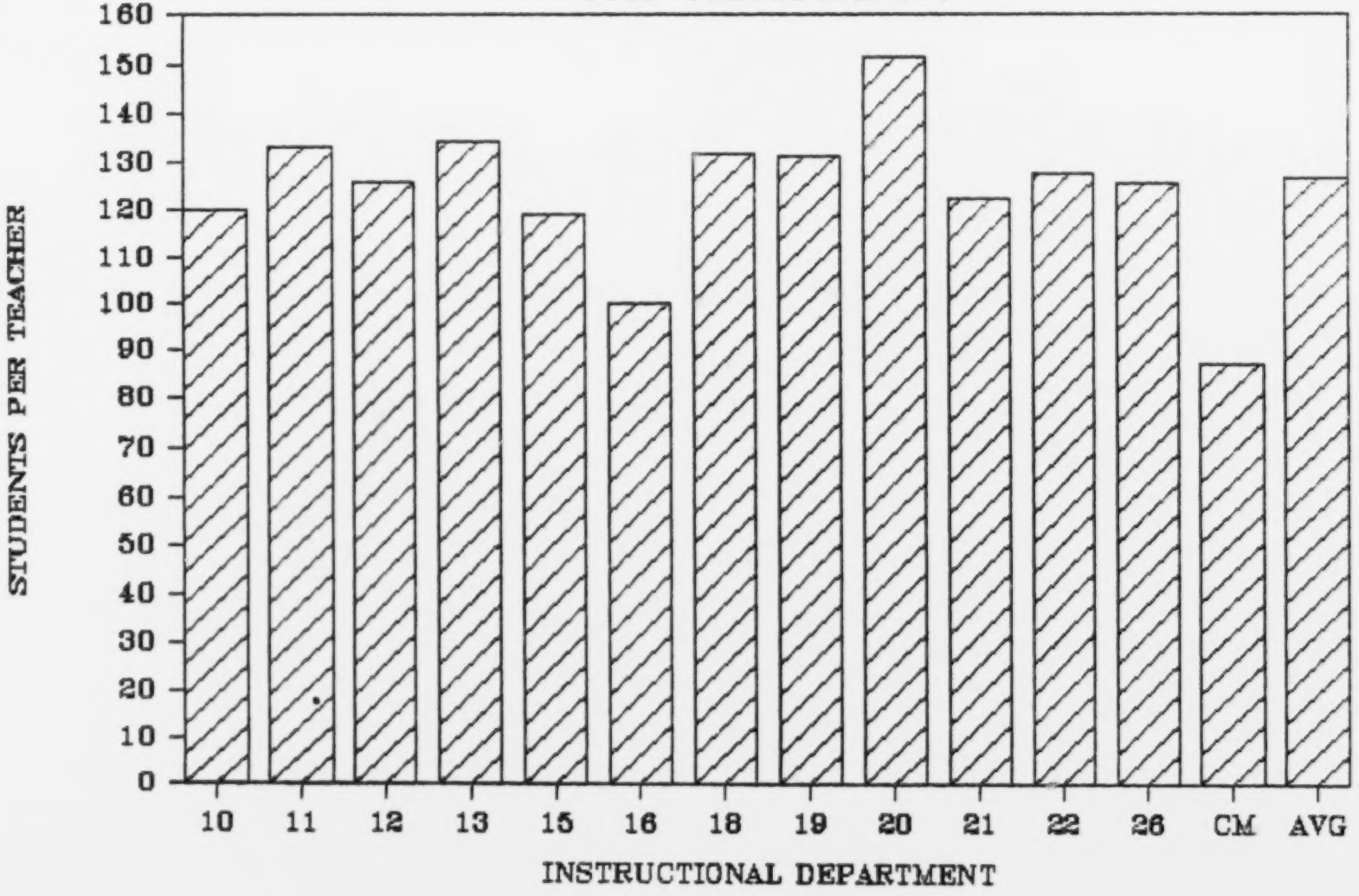
FIGURE 4

# NUMBER OF STUDENTS PER TEACHER

FOUR-SCHOOL AVERAGE




| | | | | | |
|---|---|---|---|---|---|
| 10 | LANGUAGE ARTS | 14 | INDUSTRIAL ARTS | 21 | FOREIGN LANGUAGE |
| 11 | SOCIAL STUDIES | 15 | MATHEMATICS | 22 | BUSINESS EDUCATION |
| 12 | SCIENCE | 17 | HEALTH | 26 | MUSIC & DRAMA |
| 13 | ARTS & CRAFTS | 20 | PHYSICAL EDUCATION | CM | COMPUTER |
| 15 | HOMEMAKING | | | | |

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Delegate High School it is six classes per day, and at Advance High School it is five classes per day for teachers in the language arts, social studies, science, mathematics, and foreign languages departments and six classes per day in the other departments. Table 11 presents the average number of students per teacher for each instructional department for the four high schools. Delegate High School has the highest average student/teacher ratio because of its six-class-per-day schedule for teachers. Its average is also increased because it of the relatively large class sizes in the arts and crafts, homemaking, mathematics, health, physical education, and music and drama departments. Central High School has the lowest average student/teacher ratio with a five-class-per-day schedule for teachers. Central also generally has the lowest student/teacher ratios throughout the instructional departments among the four schools.

Supply and equipment allocations offer high school administrators the greatest flexibility in resource allocation decisions. Whereas the allocation decisions for personnel are constrained more by student enrollments and maintenance of equitable teaching loads, allocations of supply and equipment dollars reflect more the nature of the instructional approaches the various departments use. Furthermore, the high school's priorities can be emphasized by directing these monies into those areas that the school administrators wish to strengthen. Table 12 provides the actual dollar amounts that were assigned to each area in the four high schools. The extraordinary equipment allocation to Delegate High School is omitted from this analysis

TABLE 11
AVERAGE NUMBER OF STUDENTS PER TEACHER BY DEPARTMENT
1985-86

| DEPARTMENT | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| LANGUAGE ARTS | 113 | 125 | 119 | 123 |
| SOCIAL STUDIES | 134 | 134 | 125 | 138 |
| SCIENCE | 133 | 117 | 123 | 130 |
| ARTS & CRAFTS | 128 | 132 | 119 | 158 |
| HOMEMAKING | 111 | 135 | 82 | 147 |
| INDUSTRIAL ARTS | 110 | 91 | 82 | 119 |
| MATHEMATICS | 127 | 134 | 123 | 143 |
| HEALTH | 134 | 108 | 135 | 148 |
| PHYSICAL EDUCATION | 111 | 173 | 143 | 178 |
| FOREIGN LANGUAGE | 117 | 119 | 120 | 133 |
| BUSINESS EDUCATION | 135 | 122 | 125 | 128 |
| MUSIC & DRAMA | 128 | 116 | 118 | 140 |
| COMPUTER | 76 | 108 | 43 | 123 |
| SCHOOL AVERAGE | 123 | 127 | 119 | 136 |

TABLE 12
SUPPLY AND EQUIPMENT DOLLAR ALLOCATIONS BY DEPARTMENT
1985-86

| DEPARTMENT | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| LANGUAGE ARTS | $5,903 | $4,250 | $3,000 | $10,545 |
| SOCIAL STUDIES | $4,627 | $1,870 | $2,250 | $3,100 |
| SCIENCE | $16,710 | $12,313 | $5,799 | $13,631 |
| ARTS & CRAFTS | $5,994 | $7,777 | $2,416 | $2,500 |
| HOMEMAKING | $7,347 | $5,512 | $3,112 | $9,404 |
| INDUSTRIAL ARTS | $20,579 | $13,033 | $16,548 | $26,573 |
| MATHEMATICS | $4,788 | $2,000 | $800 | $1,500 |
| HEALTH | $1,100 | $3,045 | $1,053 | $1,122 |
| PHYSICAL EDUCATION | $11,810 | $7,420 | $3,150 | $5,994 |
| FOREIGN LANGUAGE | $4,580 | $3,499 | $400 | $1,500 |
| BUSINESS EDUCATION | $13,167 | $12,348 | $4,000 | $21,716 |
| MUSIC & DRAMA | $11,893 | $6,660 | $6,015 | $16,205 |
| COUNSELING | $7,502 | $910 | $700 | $2,000 |
| TESTING | $1,889 | $300 | $0 | $1,010 |
| LIBRARY | $7,934 | $1,099 | $1,200 | $4,275 |
| AUDIOVISUAL | $12,540 | $8,175 | $3,536 | $11,625 |
| OFFICE OF PRINCIPAL | $26,198 | $7,000 | $21,932 | $22,835 |
| SCHOOL-WIDE ITEMS | | | | |
| TEXTBOOKS | $41,687 | $41,331 | $38,700 | $22,640 |
| LIBRARY BOOKS | $14,394 | $6,675 | $6,450 | $13,880 |
| REFERENCE BOOKS | $4,508 | $2,850 | $1,500 | $0 |
| PERIODICALS | $3,829 | $2,320 | $6,592 | $2,130 |
| COMPUTER | $22,000 | $24,195 | $32,500 | $22,700 |
| SCHOOL TOTAL | $250,979 | $174,582 | $161,653 | $216,885 |
| SUPPLIES | $126,867 | $66,935 | $58,943 | $79,132 |
| EQUIPMENT | $37,694 | $30,276 | $16,968 | $76,403 |
| SCHOOL-WIDE ITEMS | $86,418 | $77,371 | $85,742 | $61,350 |

because the allocation process is not yet complete and because its uniqueness and magnitude would distort the comparisons. The differences in student enrollment among the four high schools make direct comparisons of dollar allocation amounts inappropriate; however, some observations can be made. There are substantial and consistent differences across all four schools in the amounts allocated to various instructional departments. For example, in all four schools, science, industrial arts, business, music and drama, and computer departments have larger amounts allocated to them than do language arts, social studies, mathematics, health, and foreign language departments. Although the data analysis attempted to make the reported budget items consistent for all schools, differences in accounting and reporting practices in the three districts resulted in some variation in treatment of expenditure items. For example, counseling, testing, and reference books were areas where expenditures for items reported in some schools were largely assumed by the principal's office or by the district in others. However, these differences are in relatively minor areas and do not significantly affect the results or their interpretation.

Table 13, which reports each school's allocation results in terms of percentage of the total supply and equipment budget allocated to each department, provides a convenient means of comparing allocations to departments by the four high schools. The average allocation percentage for each department in all four schools is pictured in Figure 5. The elimination of school-size factors through such an analysis of budget percentages makes common patterns and differences in allocations to the various

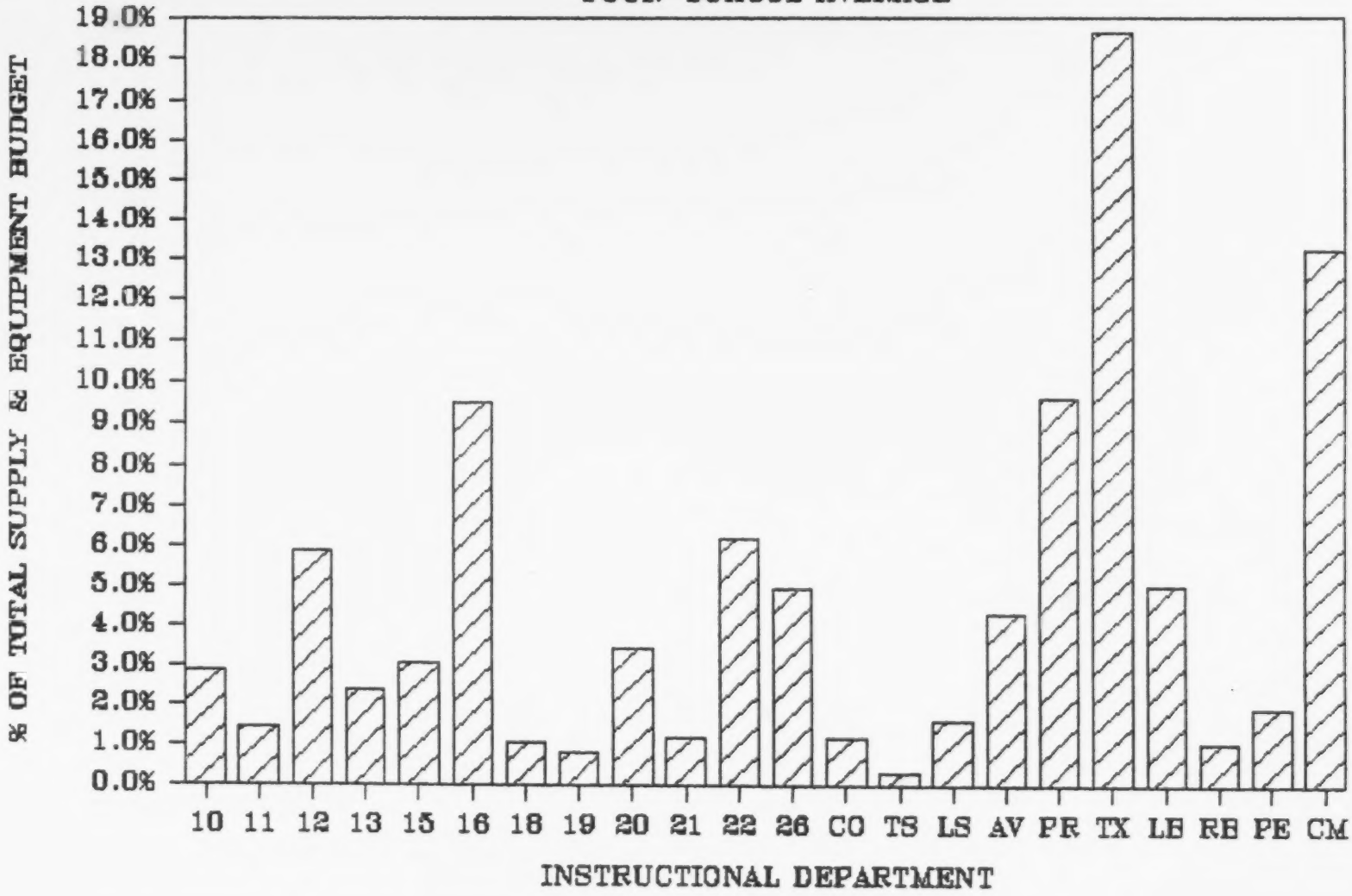
TABLE 13
PERCENTAGE OF SUPPLY AND EQUIPMENT DOLLAR ALLOCATIONS BY DEPARTMENT
1985-86

| DEPARTMENT | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| LANGUAGE ARTS | 2.4% | 2.4% | 1.9% | 4.9% |
| SOCIAL STUDIES | 1.8% | 1.1% | 1.4% | 1.4% |
| SCIENCE | 6.7% | 7.1% | 3.6% | 6.3% |
| ARTS & CRAFTS | 2.4% | 4.5% | 1.5% | 1.2% |
| HOMEMAKING | 2.9% | 3.2% | 1.9% | 4.3% |
| INDUSTRIAL ARTS | 8.2% | 7.5% | 10.2% | 12.3% |
| MATHEMATICS | 1.9% | 1.1% | 0.5% | 0.7% |
| HEALTH | 0.4% | 1.7% | 0.7% | 0.5% |
| PHYSICAL EDUCATION | 4.7% | 4.3% | 1.9% | 2.8% |
| FOREIGN LANGUAGE | 1.8% | 2.0% | 0.2% | 0.7% |
| BUSINESS EDUCATION | 5.2% | 7.1% | 2.5% | 10.0% |
| MUSIC & DRAMA | 4.7% | 3.8% | 3.7% | 7.5% |
| COUNSELING | 3.0% | 0.5% | 0.4% | 0.9% |
| TESTING | 0.8% | 0.2% | 0.0% | 0.5% |
| LIBRARY | 3.2% | 0.6% | 0.7% | 2.0% |
| AUDIOVISUAL | 5.0% | 4.7% | 2.2% | 5.4% |
| OFFICE OF PRINCIPAL | 10.4% | 4.0% | 13.6% | 10.5% |
| SCHOOL-WIDE ITEMS | | | | |
| TEXTBOOKS | 16.6% | 23.7% | 23.9% | 10.4% |
| LIBRARY BOOKS | 5.7% | 3.8% | 4.0% | 6.4% |
| REFERENCE BOOKS | 1.8% | 1.6% | 0.9% | 0.0% |
| PERIODICALS | 1.5% | 1.3% | 4.1% | 1.0% |
| COMPUTER | 8.8% | 13.9% | 20.1% | 10.5% |
| SCHOOL TOTAL | 100.0% | 100.0% | 100.0% | 100.0% |
| SUPPLIES | 50.5% | 38.3% | 36.5% | 36.5% |
| EQUIPMENT | 15.0% | 17.3% | 10.5% | 35.2% |
| SCHOOL-WIDE ITEMS | 34.4% | 44.3% | 53.0% | 28.3% |

FIGURE 5

# % SUPPLY & EQUIPMENT $ ALLOCATIONS

## FOUR-SCHOOL AVERAGE




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | LANGUAGE ARTS | 18 | MATHEMATICS | CO | COUNSELING | TX | TEXTBOOKS |
| 11 | SOCIAL STUDIES | 19 | HEALTH | TS | TESTING | LB | LIBRARY BOOKS |
| 12 | SCIENCE | 20 | PHYSICAL EDUCATION | LS | LIBRARY SUPPLIES | RB | REFERENCE BOOKS |
| 13 | ARTS & CRAFTS | 21 | FOREIGN LANGUAGE | AV | AUDIOVISUAL | PE | PERIODICALS |
| 15 | HOMEMAKING | 22 | BUSINESS EDUCATION | PR | OFFICE OF PRINCIPAL | CM | COMPUTER |
| 16 | INDUSTRIAL ARTS | 26 | MUSIC & DRAMA | | | | |





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departments readily discernible.

Basic academic areas, such as language arts, social studies, science (to a lesser extent), and mathematics, receive relatively small shares of the instructional supply and equipment budget. Presumably this occurs because of the relatively low cost of instructional materials in these areas and not because they have a low priority in the schools. Because its equipment costs are higher, industrial arts consumes a much higher percentage of the schools' budgets.

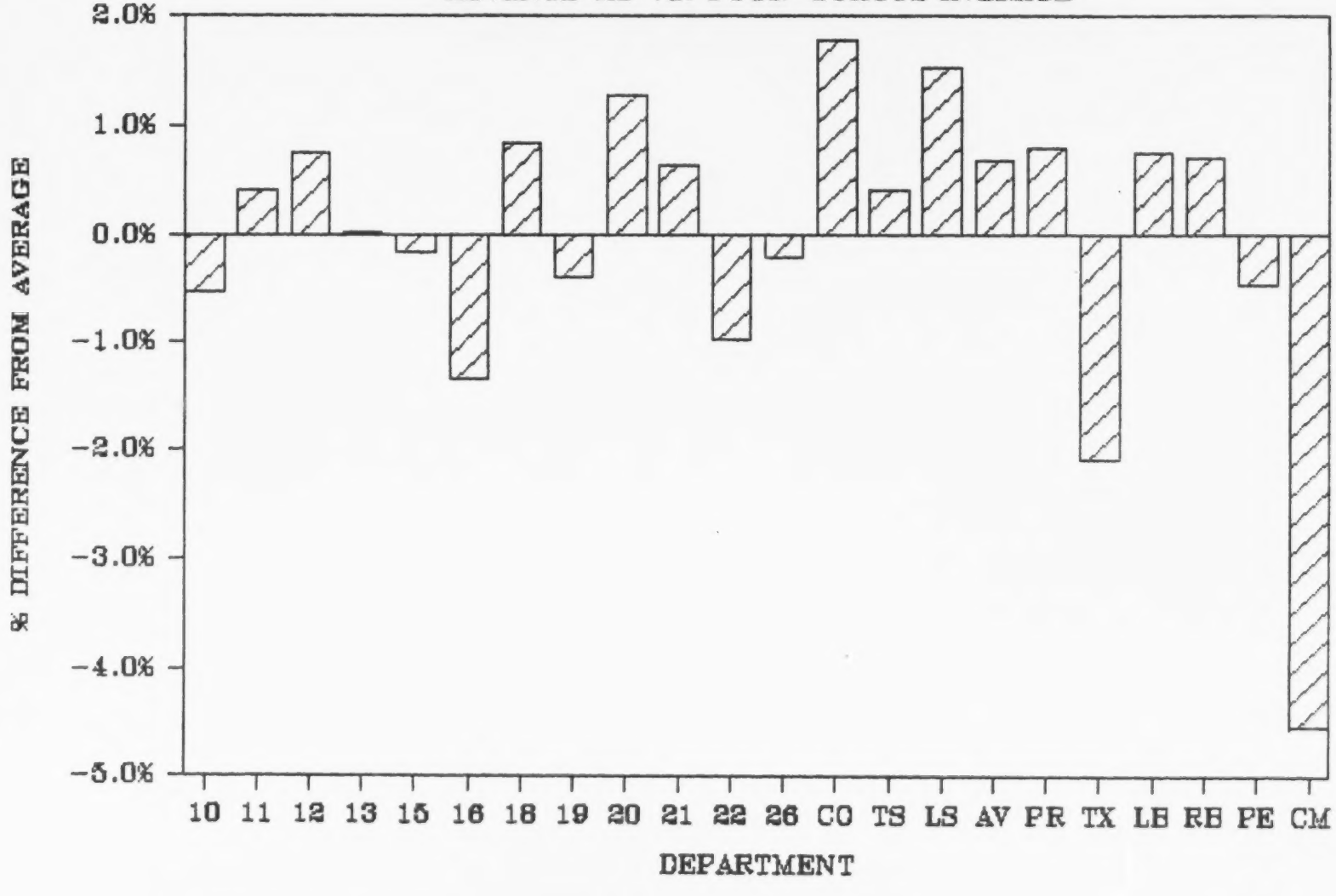
The individual schools also exhibit expenditure differences among departments, and this reflects the priorities of the schools. These variations are displayed in the graphs in Figures 6-9, which compare the difference between the percentage of the supply and equipment budget that each school allocated to each department and the average percentage allocated by all four schools. Those departments which are either well above or well below the average stand out clearly.

Advance High School, which is academically oriented, has relatively more of its budget assigned to science, mathematics, foreign languages, and physical education departments, while its industrial arts and business departments have a smaller proportion of the budget allocated to them when compared to the four-school average. Counseling shows an above-average allocation, due largely to the fact that other schools do not classify some of their expenditures in this function. The below-average textbook allocation indicates less need for these items in the upcoming year; and the below-average allocation for computers, which are clearly a priority for the school, can be

FIGURE 6

# % DIFFERENCE S & E $ ALLOCATIONS

## ADVANCE HS VS. FOUR-SCHOOL AVERAGE




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | LANGUAGE ARTS | 15 | MATHEMATICS | CO | COUNSELING | TX | TEXTBOOKS |
| 11 | SOCIAL STUDIES | 17 | HEALTH | TS | TESTING | LB | LIBRARY BOOKS |
| 12 | SCIENCE | 20 | PHYSICAL EDUCATION | LS | LIBRARY SUPPLIES | RB | REFERENCE BOOKS |
| 13 | ARTS & CRAFTS | 21 | FOREIGN LANGUAGE | AV | AUDIOVISUAL | PE | PERIODICALS |
| 16 | HOMEMAKING | 22 | BUSINESS EDUCATION | PR | OFFICE OF PRINCIPAL | CM | COMPUTER |
| 14 | INDUSTRIAL ARTS | 26 | MUSIC & DRAMA | | | | |



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attributed to the fact that Advance High School has been purchasing instructional computers for several years and already has a number in service.

Bridge High School has an above-average allocation of its supply and equipment budget for the arts and crafts department and, to a lesser extent, for the science, health, physical education, foreign languages, and business departments. It also has a below-average allocation to industrial arts. Bridge High School also has a relatively low proportion of the budget in the office of the principal account, which reflects the principal's belief that the available money should be allocated and the departments should live within their allocated amounts if at all possible rather than rely on a contingency fund (in the principal's account) to take care of their overspending. An above-average allocation to textbooks reflects the fact that this area was established as the number one priority in the budgeting process for the year.

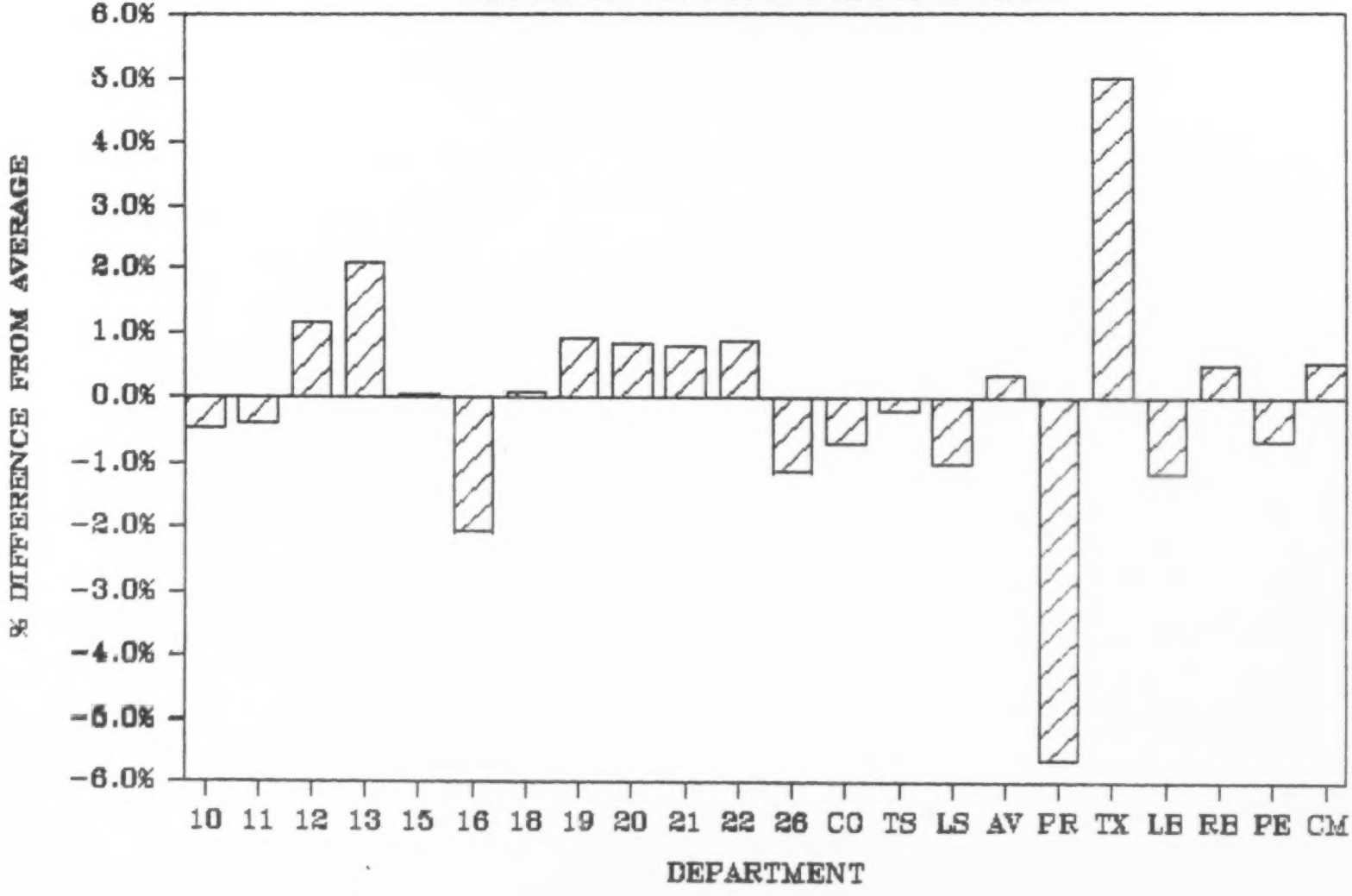
At Central High School, with one exception, all of the instructional departments receive allocations that are below the four-school average. The exception is industrial arts, an area that the school emphasizes. Above-average allocations were made to the office of the principal (for the contingency fund and for a copier utilized on a schoolwide basis), textbooks, and computers (special district allocation).

Delegate High School has above-average allocations to the language arts, industrial arts, and business departments. The above-average allocation to the music and drama department is due primarily to purchase of equipment for the theater. The textbook

FIGURE 7

# % DIFFERENCE S & E $ ALLOCATIONS

## BRIDGE HS VS. FOUR-SCHOOL AVERAGE




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | LANGUAGE ARTS | 18 | MATHEMATICS | CO | COUNSELING | TX | TEXTBOOKS |
| 11 | SOCIAL STUDIES | 19 | HEALTH | TS | TESTING | LB | LIBRARY BOOKS |
| 12 | SCIENCE | 20 | PHYSICAL EDUCATION | LS | LIBRARY SUPPLIES | RB | REFERENCE BOOKS |
| 13 | ARTS & CRAFTS | 21 | FOREIGN LANGUAGE | AV | AUDIOVISUAL | PE | PERIODICALS |
| 15 | HOMEMAKING | 22 | BUSINESS EDUCATION | PR | OFFICE OF PRINCIPAL | CM | COMPUTER |
| 16 | INDUSTRIAL ARTS | 26 | MUSIC & DRAMA | | | | |



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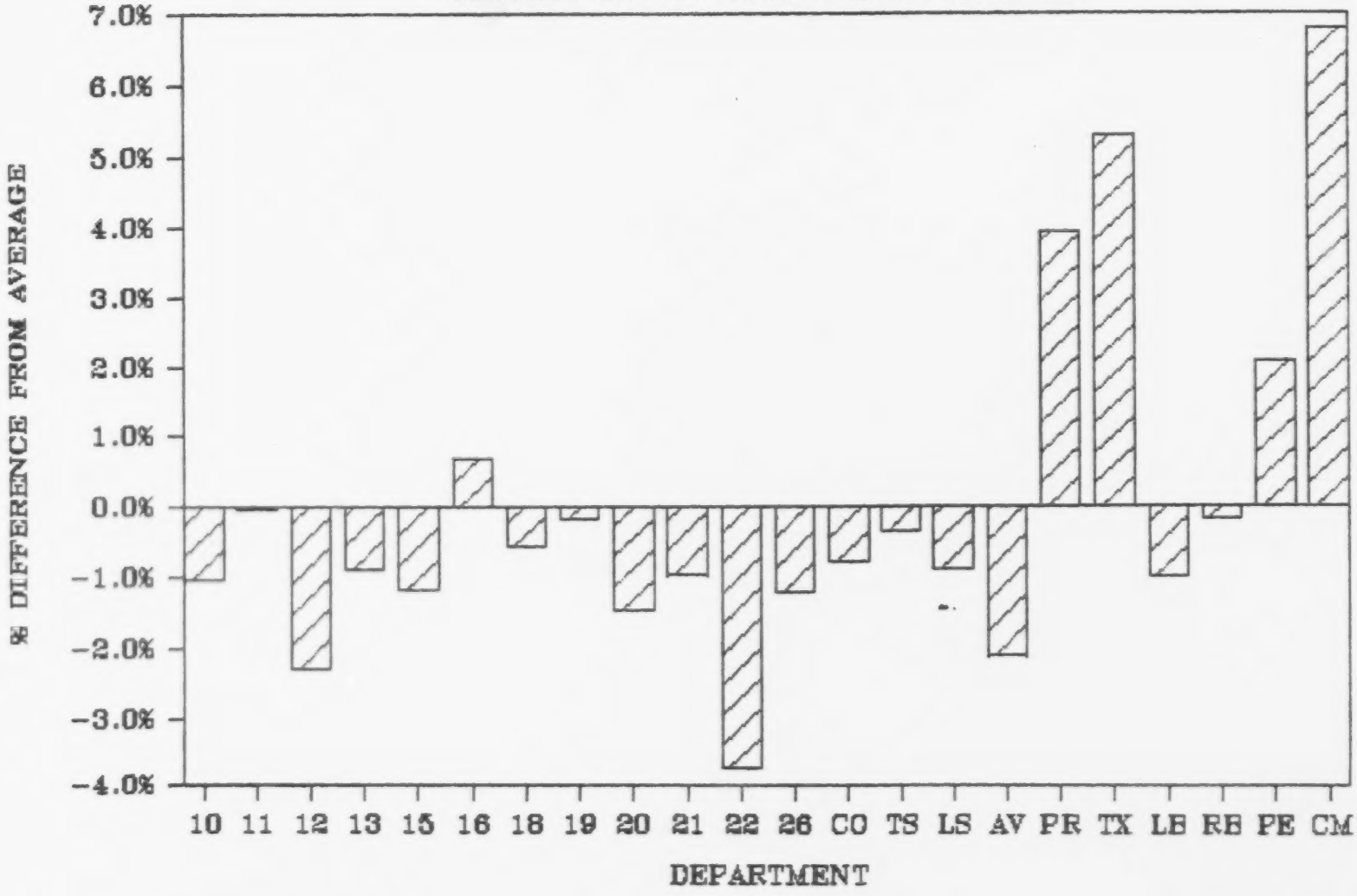
FIGURE 8

# % DIFFERENCE S & E $ ALLOCATIONS

## CENTRAL HS VS. FOUR-SCHOOL AVERAGE




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | LANGUAGE ARTS | 18 | MATHEMATICS | CO | COUNSELING | TX | TEXTBOOKS |
| 11 | SOCIAL STUDIES | 19 | HEALTH | TS | TESTING | LB | LIBRARY BOOKS |
| 12 | SCIENCE | 20 | PHYSICAL EDUCATION | LS | LIBRARY SUPPLIES | RB | REFERENCE BOOKS |
| 13 | ARTS & CRAFTS | 21 | FOREIGN LANGUAGE | AV | AUDIOVISUAL | PE | PERIODICALS |
| 15 | HOMEMAKING | 22 | BUSINESS EDUCATION | PR | OFFICE OF PRINCIPAL | CM | COMPUTER |
| 16 | INDUSTRIAL ARTS | 26 | MUSIC & DRAMA | | | | |



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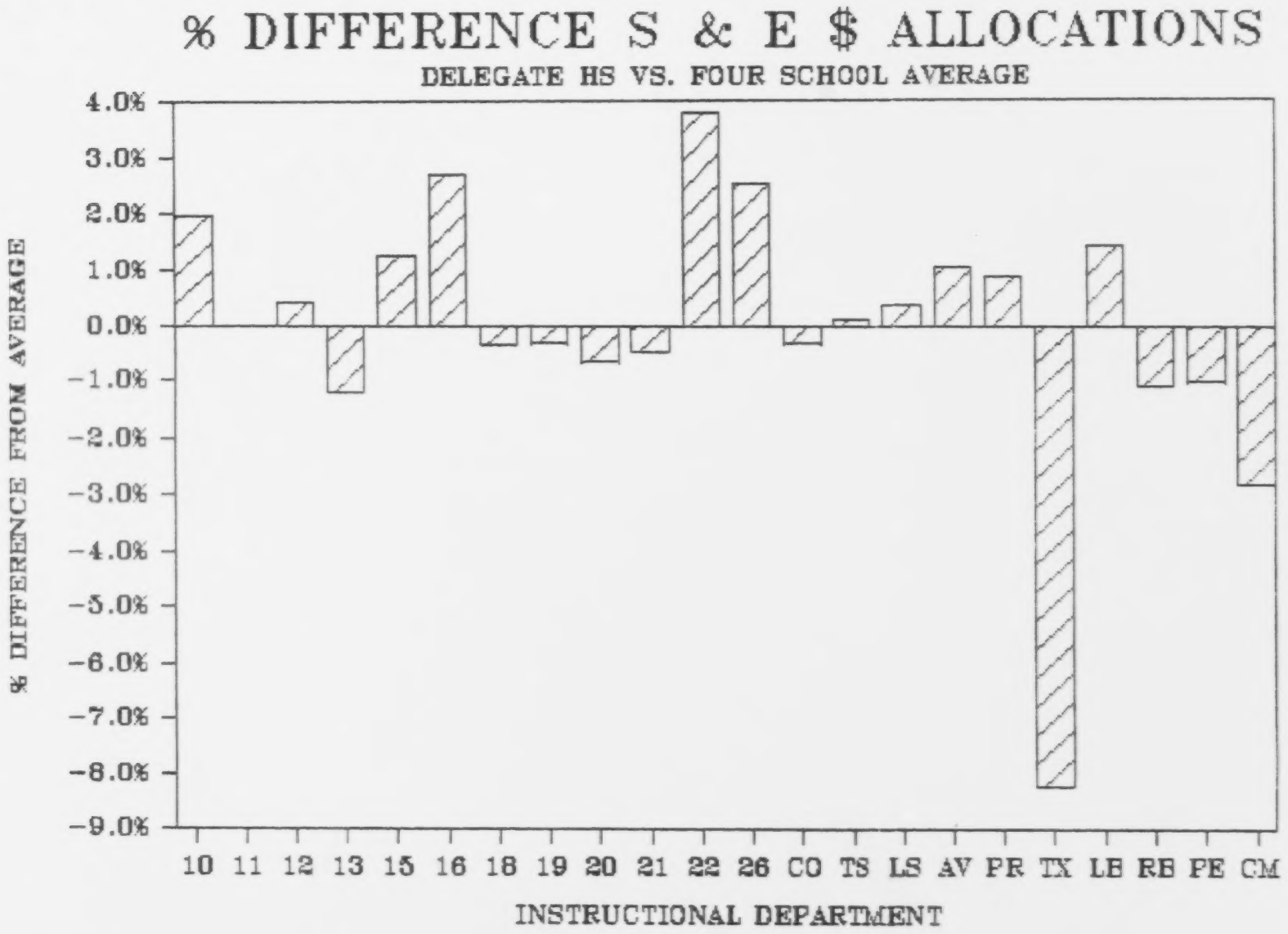
FIGURE 9



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allocation is well below the four-school average, and the allocation for computers is also below average. Overall, however, the Delegate High School allocation for equipment (Table 12) is quite high in comparison with equipment allocations for the other schools (disregarding the extraordinary equipment allocation for Central High School).

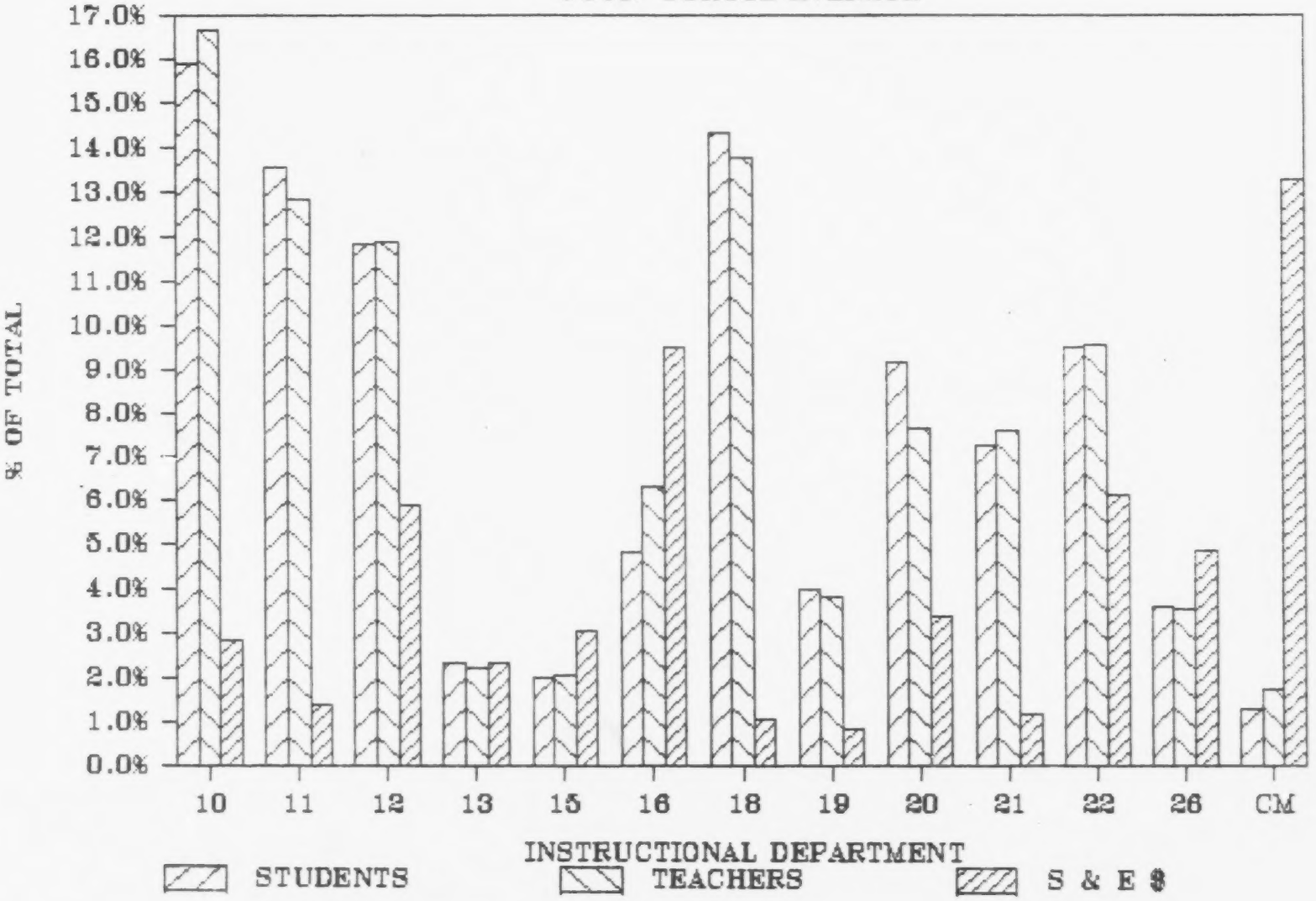
By using information on the distribution of students across the instructional departments, the allocations for teachers, and the budget figures for supplies and equipment, it is now possible to compare these three areas for compatibility. Figure 10 shows the four-school average percentages of students, teachers, and the supply and equipment budget associated with each instructional department. As can be surmised from the prior information, there are imbalances among the departments. The fact that there are imbalances is not necessarily inappropriate. There may be sound reasons for having the allocation of supply and equipment dollars to a department disproportionate to the number of students that it serves. The following analysis points out some of these occasions and offers some possible explanations.

The basic academic areas, such as language arts, social studies, mathematics, and foreign languages, have very low proportions of the supply and equipment budget allocated to them in comparison to the number of students enrolled in them or to the number of teachers assigned to them. There are several explanations for this pattern. These departments' courses typically are heavily dependent upon textbooks and other assigned readings and do not require substantial equipment. (The costs

FIGURE 10

# DISTRIBUTION OF STUDENTS, TEACHERS, & $

FOUR-SCHOOL AVERAGE



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for textbooks, library books, reference books, and periodicals are shown separately as schoolwide costs in Table 12 of this analysis.) The equipment that is used in these areas may have been purchased in previous years (and is then used for many years thereafter) and/or may have been accounted for in other cost areas (e.g., computers). Areas such as industrial arts, music and drama, and computers, where the costs are disproportionate to the enrollments or staffing, are those where a heavy investment in equipment is necessary to carry out the instructional program.

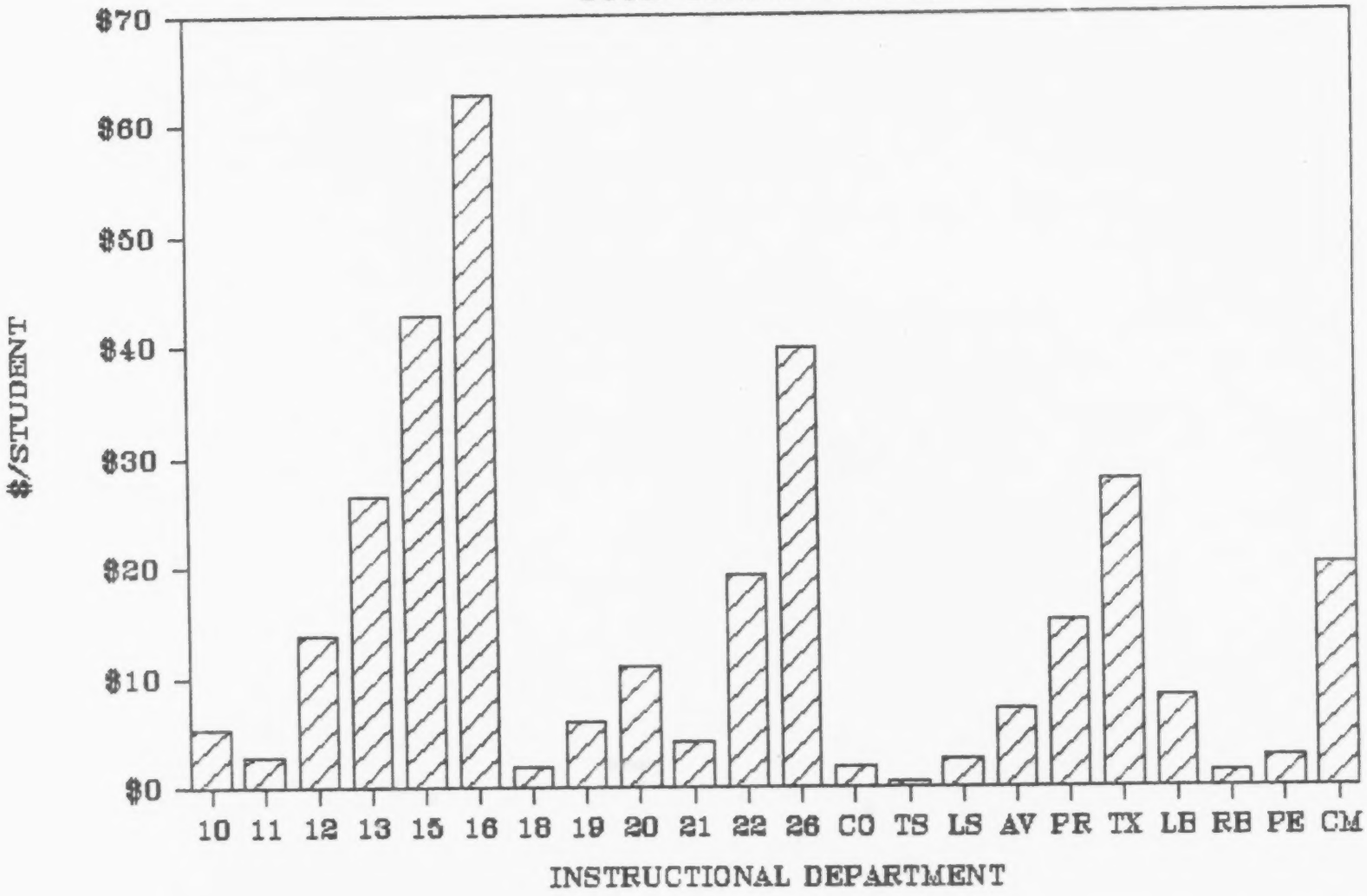
Another method of comparing allocation results is to calculate supply and equipment dollar-per-student amounts. This method combines both the student enrollment figures and the supply and equipment allocations. Figure 11 illustrates the four-school average cost-per-student for supplies and equipment. Those departments or areas that had a relatively high allocation of supply and equipment funds, low enrollments, or a combination of the two, had correspondingly high per-student costs; typically, such areas include industrial arts, homemaking, music and drama, and arts and crafts and such items as textbooks and computers. Conversely, those departments or areas with relatively low supply and equipment allocations and high enrollments had low per-student costs; these departments include language arts, social studies, mathematics, health, and foreign languages.

The four high schools exhibited considerable differences in the resultant cost-per-student amounts for their various departments. Table 14 presents the cost per student for each department, for support or administrative units, and for

FIGURE 11

# COST PER STUDENT (S & E $)

## FOUR-SCHOOL AVERAGE




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | LANGUAGE ARTS | 18 | MATHEMATICS | CO | COUNSELING | TX | TEXTBOOKS |
| 11 | SOCIAL STUDIES | 19 | HEALTH | TS | TESTING | LB | LIBRARY BOOKS |
| 12 | SCIENCE | 20 | PHYSICAL EDUCATION | LS | LIBRARY SUPPLIES | RB | REFERENCE BOOKS |
| 13 | ARTS & CRAFTS | 21 | FOREIGN LANGUAGE | AV | AUDIOVISUAL | PE | PERIODICALS |
| 15 | HOMEMAKING | 22 | BUSINESS EDUCATION | PR | OFFICE OF PRINCIPAL | CM | COMPUTER |
| 16 | INDUSTRIAL ARTS | 26 | MUSIC & DRAMA | | | | |

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TABLE 14
SUPPLY AND EQUIPMENT ALLOCATION PER STUDENT-PERIOD BY DEPARTMENT
1985-86

| DEPARTMENT | ADVANCE | BRIDGE | CENTRAL | DELEGATE |
|---|---|---|---|---|
| LANGUAGE ARTS | $3.72 | $4.14 | $2.42 | $10.94 |
| SOCIAL STUDIES | $3.45 | $1.93 | $1.99 | $4.50 |
| SCIENCE | $14.26 | $15.51 | $6.37 | $19.06 |
| ARTS & CRAFTS | $23.51 | $36.86 | $14.47 | $31.65 |
| HOMEMAKING | $49.64 | $40.83 | $37.95 | $42.75 |
| INDUSTRIAL ARTS | $93.54 | $65.17 | $28.19 | $64.03 |
| MATHEMATICS | $3.10 | $1.96 | $0.76 | $1.97 |
| HEALTH | $3.42 | $14.16 | $2.61 | $4.14 |
| PHYSICAL EDUCATION | $18.93 | $12.62 | $4.07 | $8.41 |
| FOREIGN LANGUAGE | $3.98 | $6.14 | $1.19 | $5.64 |
| BUSINESS EDUCATION | $19.51 | $28.19 | $5.01 | $24.24 |
| MUSIC & DRAMA | $23.64 | $41.11 | $25.49 | $69.55 |
| COUNSELING | $4.31 | $0.78 | $0.53 | $2.03 |
| TESTING | $1.09 | $0.26 | $0.00 | $1.03 |
| LIBRARY | $4.56 | $0.94 | $0.91 | $4.34 |
| AUDIOVISUAL | $7.20 | $7.02 | $2.67 | $11.81 |
| OFFICE OF PRINCIPAL | $15.05 | $6.01 | $16.55 | $23.21 |
| SCHOOL-WIDE ITEMS | | | | |
| TEXTBOOKS | $23.94 | $35.48 | $29.21 | $23.01 |
| LIBRARY BOOKS | $8.27 | $5.73 | $4.87 | $14.11 |
| REFERENCE BOOKS | $2.59 | $2.45 | $1.13 | $0.00 |
| PERIODICALS | $2.20 | $1.99 | $4.98 | $2.16 |
| COMPUTER | $12.64 | $20.77 | $24.53 | $23.07 |
| SCHOOL AVERAGE | $144.16 | $149.86 | $122.00 | $220.41 |
| SUPPLIES | $72.87 | $57.45 | $44.49 | $80.42 |
| EQUIPMENT | $21.65 | $25.99 | $12.81 | $77.65 |
| SCHOOL-WIDE ITEMS | $49.64 | $66.41 | $64.71 | $62.35 |

schoolwide items in each school. For the instructional departments, the cost figures were calculated by dividing the supply and equipment dollar allocation in the budget (Table 12) by the student enrollment in the department (student-period enrollments in Table 9). For support, administrative, schoolwide items (including computers) and school totals, the budget amounts were divided by the school enrollment (Table 9). While the same general pattern of high- and low-cost departments prevailed, there were substantial variations among similar departments in the four schools. Again, these differences were the result of variations in student enrollments, program needs, and supply and equipment allocation in each school.

## MANAGEMENT OF RESOURCES IN HIGH SCHOOLS

Management of resources is the set of activities required to direct and control a high school's operations during the school year. This involves monitoring the use of personnel and the expenditures for supplies and equipment and other items. Although supervision and evaluation of staff members is also an important function for school administrators, it is beyond the scope of this study. Therefore, in this study, management of resources is examined by focusing on the ways that administrators direct and control the high school's budgeted expenditures. Essentially this involves the implementation of the high school budget established in the distribution phase.

Two purposes, sometimes in tension with one another, guide this process: 1) staying within established budget limits, and 2) responding in a cost-effective manner to actual events during

the year. Proper control of spending among the school's various departments is a basic management task during this stage of the resource allocation process. High schools must have in operation an expenditure information system that informs both administrators and teachers how much has been spent and how much is left in each budget account. However, the specific amounts budgeted for each department were established in the preceding year, and actual events may not have turned out exactly as anticipated. For example, enrollments may not be as projected, school building or school district priorities may have shifted as a result of public pressures, or new items that were not considered in the original budget formulation may be available . So, beyond the watchdog function, the resource management process can be used as a positive vehicle for shifting resources to meet unforeseen opportunities and changing priorities and/or as a component of an incentive system in the school. Administrative procedures both for controlling spending and for anticipating and accommodating reasonable and useful budget shifts are necessary.

## The Process of Managing Expenditures

The description of the process of managing high school expenditures can be divided into three parts: necessary management information, operations during the year, and year-end activities. For an administrator, managing the expenditures for supplies and equipment properly means primarily reviewing the teachers' and departments' requests for expenditures during the year and either approving, modifying, or rejecting the requests while staying within the high school's overall budget allocation.

In order to make an informed judgment about the appropriateness of an expenditure request, an administrator must have some basic information about the request. First, is the item requested an appropriate or permitted one under district policies and guidelines? Second, how much money is being requested? Third, is there sufficient unspent money remaining in the department's budget account to cover the cost of the item requested? If there is insufficient money but the request is still an appropriate one, are there other sources of funds within the school from which money for the request could be taken?

Budget and Expenditure Records. Appropriate information can be provided through a system of expenditure records maintained by the high school. The basic record is a ledger page--one page for each budget account, that is, separate pages to record supply expenditures and equipment expenditures (if budgeted separately) for each department. The ledger page contains the amount originally budgeted for that department's account, the amount encumbered to date (i.e., items for which a commitment has been made, but for which payment has not yet been remitted--for example, purchase order amounts), the actual expenditures to date, and the amount of available money remaining in the account. With this information at hand, an administrator can readily determine whether there is sufficient money remaining in a department's account to allow its budget request.

Traditionally, the ledger accounts have been kept by hand, using individual, ruled pages to record the original budget and any expenditure activity during the year. Now, with the availability of microcomputers for administrative purposes, the